Royal Air Force

AIR POWER REVIEW

Volume 10 Number 2 Summer 2007

Air Power:
A Middle East Perspective
His Royal Highness
Lieutenant General Prince
Feisal of Jordan

Combat Air Power in
Irregular Warfare
Wg Cdr Harry Kemsley

The Fall and Rise of
the Luftwaffe
Air Marshal Stu Peach

Ruling the Empire out
of the Central Blue
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Israel's 2006 Campaign
in the Lebanon
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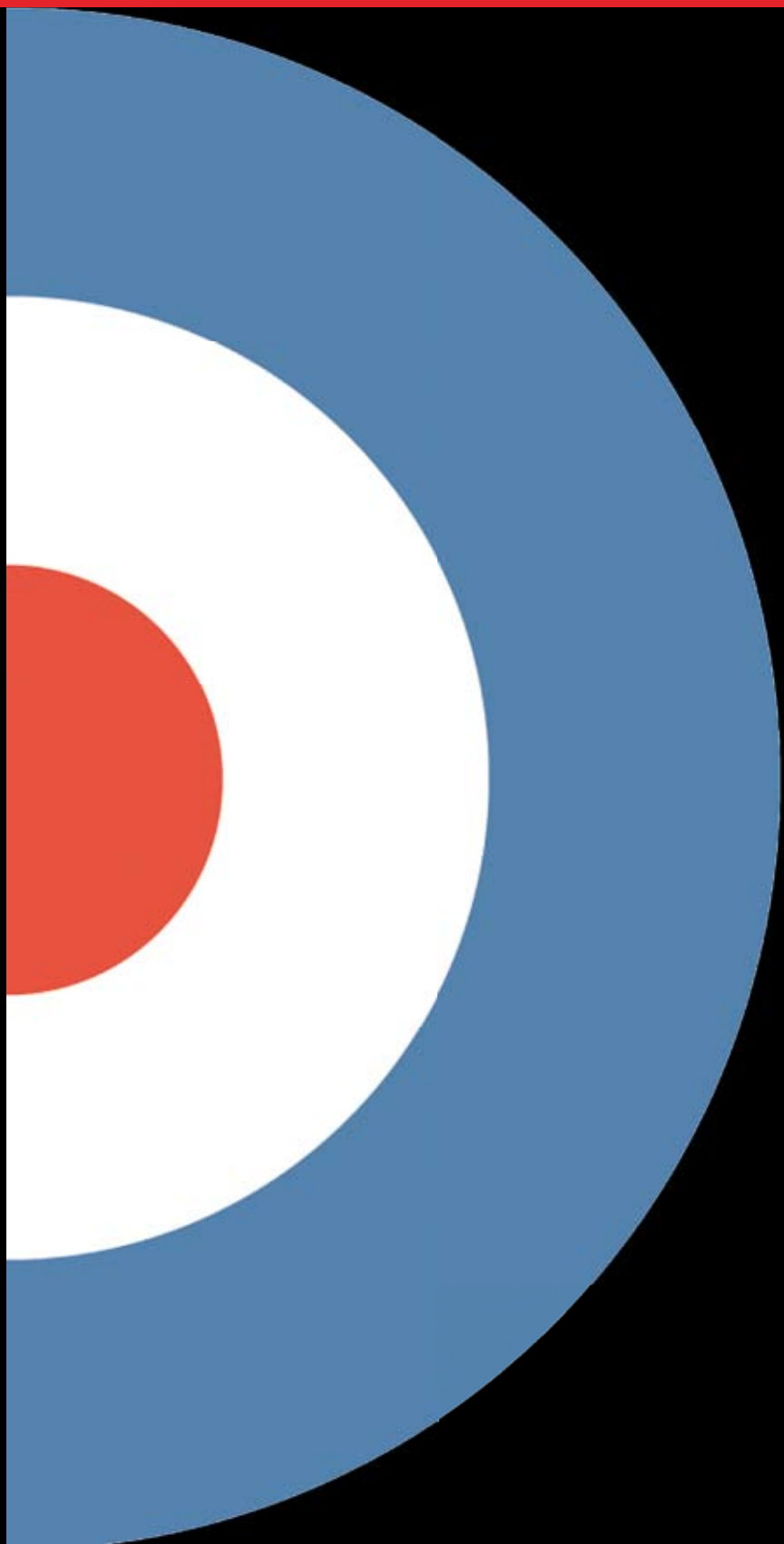

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Contributions from both Service and civilian authors are sought which will contribute to existing knowledge and understanding of the subject. Any topic will be considered by the Air Power Review Management Board and a payment of £200 will be made for each article published.

Articles should be original and preferably not previously published, although those of sufficient merit will not be precluded. Between 2,000 and 10,000 words in length, articles should list bibliographical references as end notes, and state a word count. Lengthy articles may be published in instalments. Contributions from serving military personnel should be in accordance with DCI GEN 313 dated 26 November 1999.

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Foreword

This edition of *Air Power Review* has a strong regional focus, which is well introduced by the first article, *Air Power: A Middle East Perspective*. This is slightly unusual in that it was produced from a presentation given at the fifth Middle East Air Symposium (MEAS V) held in Jordan last year. The lecture was given by His Royal Highness Lieutenant General Prince Feisal, Special Assistant to the Chief of Staff of the Jordanian Armed Forces, and represents a unique perspective of air power – one that is not often aired in a Western publication. The article consists of a paper adapted from the presentation, together with a series of questions and answers based around themes developed from the paper, which the writer was able to put to Prince Feisal during an interview earlier on this year. It covers a very wide range of subject, ranging from Jordan's own perspectives on the use of air power in the Middle Eastern environment through to some very telling observations on the way that the network-centric should be developed. Highly recommended as reading for anyone with an interest in how others perceive air power.

The next piece, *Combat Air Power in Irregular Warfare*, also focuses on the Middle East, but looking at a very different subject area. For the last year Wing Commander 'Harry' Kemsley has been undertaking a Service Fellowship at King's College London, based upon work undertaken during his previous tour as Head of the Strat Cell in the permanent Combined Air Operations Centre (CAOC) at High Wycombe. This study revolved around a database involving several thousand case-studies of air power use in both Iraq and Afghanistan, built up in the CAOC at Al-Udeid in Quatar, and as such provides a unique opportunity to consider the use of air in contemporary theatres. The paper contains both an overview of the use of air power in counter-insurgency (COIN) from a historical perspective (reinforced by a later article in this edition), as well as consideration of current experience – and some of the conclusions may be surprising. What is certain is that the database provides a uniquely objective element to an area that is mostly subjective, and work in this area will be continuing to try and produce more information to help those responsible with producing strategic- and operational-level guidance on this difficult subject.

A piece from the originator of *Air Power Review* follows, with a welcome perspective on the role of the RAF in Germany during the Cold War provided courtesy of Air Marshal Stu Peach in *The Fall and Rise of the Luftwaffe*. In this paper, after briefly considering some aspects of the development of the Luftwaffe from the mid-1930s through to 1945, he concentrates on the role of the RAF in the birth and early years of the new Luftwaffe. Along the way a number of related subjects are explored, such as the growth of Anglo-American thinking on air power in the NATO context, and perhaps most importantly the air/land construct within both the RAF and Luftwaffe experiences over the 50-year history of working together. The importance of political

tact and sensitivity amongst senior RAF commanders in the post-war period as they helped the Luftwaffe to grow is also worth considering, especially in the light of the longer-term contemporary need to cultivate an effective Iraqi air force.

A return to the subject of the RAF in COIN is provided by Dr David Hall, from the King's College London staff at the Joint Service Command and Staff College Shrivenham, who in *Ruling the Empire out of the Central Blue* examines the part that the RAF played in air policing during the 1920s and 1930s. There have been a broad range of views on the effectiveness, relevance and longer-term implications of this role for the RAF over the years; this paper provides a useful overview of the subject area and plenty of material for those interested in the historical antecedents of current operations to consider.

The penultimate item in this edition, *Israel's 2006 Campaign in the Lebanon*, returns to the Middle East in order to examine the conflict that took place in Lebanon between Hisbollah and the state of Israel last year. Whilst this conflict received much media attention at the time, nowhere near so much attention has been paid to the 'lessons learned' process which Israel has been going through ever since, and there is a great deal of merit in looking more closely at this conflict. The main thesis of this particular article is concerned with what appeared to be the public perception of the effectiveness of the Israeli Air Force during the campaign, which was that this reflected a fundamental failure of air power. What is clear is that the model of a state versus non-state actor, with action being played out in a third party's territory, is one that is likely to be repeated in the future – so time spent studying this conflict is likely to be of benefit both individually and corporately.

We finish with the next in our series of extended book reviews for historic air power publications, with the spotlight this time being on the revolutionary – at least for its time – *Basic Principles of Air Warfare*. Written by a serving officer under the pseudonym of *Squadron Leader*, it represents one of the few attempts by an individual from within the newly-formed Royal Air Force to put forward a coherent approach to the use of air power, based very much on analysis of lessons learnt from the First World War. Without giving too much of the article away, the background to the writing of this particular book reveals a great deal about internal RAF politics at the time, as well as casting some doubt on the generally accepted wisdom concerning the views of the Service on the use of air power. As is often the case with early writings on how best to use air forces, many of the questions raised are still relevant today. The next book to be covered will be Douhet's *The Command of the Air*, which will make a fascinating contrast to *Basic Principles*, as although the strategic backdrop to both is the same, the authors' conclusions are very different; the reader will be left to decide which approach was more correct in the long run.

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Air Power
A Middle East Perspective

By
His Royal Highness Lieutenant General
Prince Feisal of Jordan

Lieutenant General HRH Prince Feisal, the Special Assistant to the Chairman of the Joint Chiefs of Staff of the Jordanian Armed Forces, gave a presentation at last year's Middle East Air Symposium on some aspects of air power. This paper is based on that presentation, and also includes extracts from an interview given by General Feisal based on themes arising from the presentation. They are included in this edition of Air Power Review because together they provide a unique view of air power, viewed from a perspective that we do not often see – that of an Arab air force.

The underlying theme of this article is how to justify the value of air power, and, as a former air chief, I believe I can pose a question that is pertinent both to Jordan as well as most other countries. Given an environment where domestic security and crisis operations are equally as important as security from foreign threats, can we airmen truly justify our value in the security equation? As an air chief, my role in advancing the cause of air power was paramount. As a member of the joint staff, my role is to balance air power within a national security context. As a member of the Royal Court, my responsibility is to consider the total security equation that has essentially three elements: security from foreign threats, domestic security and safety from the consequences of man-made and natural disasters.

I plan to approach this theme from three distinct aspects, which will be interwoven throughout the paper. Firstly, I will discuss the roles and challenges of conventional air forces against unconventional forces which employ asymmetric tactics and weapons; secondly, I will address the unconventional use of air force assets in support of crisis response, homeland security and humanitarian operations; and thirdly, I will present my thoughts on alternative ways that pan-Arab air forces could operate together in the future with an emphasis on integrated out-of-area operations.

Since the destruction of Saddam's military machine, we have seen a major shift from conventional warfare to unconventional warfare in our region. Consequently, we must readjust our air order of battle to align our resources more effectively with unconventional uses of air power in missions other than traditional warfare. For many reasons the Arab air order of battle, which is lighter than our Western partners, is better suited for unconventional warfare. This is fortunate, since our adversaries are adopting asymmetrical strategies and tactics to counter our reliance on conventional warfighting systems.

In fact, a counter revolution in military affairs is underway. Intellectually, much of our military doctrine is wedded to the Revolution in Military Affairs (RMA) ideology, which presupposes that the technological leaps which always transcend older realities of warfare will give militaries that successfully embrace them a considerable advantage. However, technology itself has reversed the RMA. Empowered by the Internet, cell phones and discounted airline tickets, net-enabled terrorists use new technology to operate worldwide and synchronize lethal strikes with devastating consequences. In 2005, net-enabled terrorists simultaneously bombed three Amman hotels, killing, maiming and injuring three hundred people. By camouflaging and embedding their operations within the mass population and urban environments, terrorists negate many of our high-technology weapons. Unconventional weaponry, like improvised explosive devices (IEDs) or chemical weapons employed by suicide bombers, now matches the firepower of traditional weapon systems. In 2004, our police foiled a truck bomb chemical attack that might have killed eighty thousand

Jordanians. In many ways, technology has made the suicide bomber a weapon of mass destruction. In the future, the unconventional warfare order of battle looks even bleaker. Rather than facing hundreds of suicide bombers controlled by terrorist organisations, we face the chilling prospect of facing armies of suicide bombers controlled by nation states.

From the perspective of the Royal Court, I see the dangers to Jordan's security and prosperity as being made up from a combination of man-made and natural threats. Countering conventional threats from the air, land and sea remains the bedrock of our armed forces but this must be balanced with other security and safety needs. New unconventional threats include insurgencies, improvised explosive devices and suicide bombers. Emerging threats include ballistic and cruise missiles. The increasing tensions in this area between Israel and Iran are especially troublesome since Jordan would be caught in the middle of any conflict between these 2 states. Weapons of mass destruction are back on our regional front burner with the Iranian nuclear programme, conjecture about Israel's nuclear arsenal, French declarations about pre-emptive nuclear strikes on terrorists and speculation that Iraqi weapons of mass destruction are hidden in Syria. However explosive weapons of mass destruction are my greatest worry at the present time; a water, cement or fuel truck loaded with thirty thousand pounds of explosive has a blast radius of a mile. Coupling this particular weapon with biological, chemical or radiological material would give a terrorist sufficient destructive capability to severely damage any city in our region. Other potential man-made crises include sabotage, cyber-warfare, random terrorism, organized crime, civil unrest and disobedience and the disruption of public events. While less lethal, these threats have a much higher probability of occurrence and a lot of disruptive power. As evidenced by recent earthquakes and the Asian tsunami, natural disasters also threaten the security of our citizens – in recent years, Jordanians have experienced numerous tremors along the Jordan rift valley, as well as a number of devastating flash floods. All these threats force decision makers to prioritize and re-prioritize requirements and funding. It is the responsibility of air chiefs to ensure that the decision makers are aware of the value of air power in responding to these threats, and if they are not aware, they need to be informed and educated.

What I am trying to suggest is that for most of the nations participating in MEAS[1], we will be looking at a far wider spectrum of operations in the future, covering everything from major conventional warfare to law enforcement support. This is true for most other countries as well, including the US, which, compared to Jordan, has almost unlimited resources. According to the recent Quadrennial Defense Review, the Defense Department's goal is to shift the emphasis of US forces

from countering a near-peer power to responding to a much wider range of contingencies. These include defeating terrorist networks, dealing with threatening regional powers, countering weapons of mass destruction, protecting the homeland, and fighting irregular forces for prolonged periods in places like Iraq. In addition, the Department of Defense (DoD) intends to expand its cooperation and integration with other US government agencies to help with domestic security and natural disasters such as the ones I have just mentioned. Domestic security and unconventional operations should also be major issues for the MEAS nations, which therefore need to consider closer integration in the key areas of air mobility, C4ISR[2] and combat power. Within these areas, airmen traditionally value combat power above all else, although this attitude is gradually changing. Ground commanders tend to call for more air mobility and logistics support rather than more air delivered precision weapons. From an inter-agency perspective, C4ISR is the priority. In particular there is growing interest in Jordan's lead with regard to net-centric operations, with the recent Network Centric Operations Symposium being a prime example. However, our rapid-response teams and domestic security officials are learning fast and are seeking affordable systems and procedures that can take advantage of the ability to deter or defeat adversaries by shortening the kill chain and finding, fixing, tracking, targeting, executing and assessing the enemy faster than he can 'F2T2EA' us. And this is particularly important because as our adversaries adopt asymmetric tactics, our law enforcement personnel become the new front line in national security. Now as I mentioned earlier, significant numbers of unconventional warfare forces are very active in Iraq. Additionally, many in the Iraqi law enforcement and military forces owe their allegiance to militia groups such as the Badr Brigade, Mahdi Army and Hezbollah, with the Kurds also representing another major separatist faction. In the past, trying to control these groups would have been a matter for law enforcement agencies rather than the military. However this is no longer true as the numbers and firepower are simply too great for traditionally configured law enforcement bodies. Since insurgencies tend to be borderless, the distinction between national security, traditionally defined as outside our borders, and domestic security, inside our borders, is very blurred. All of this leads me to the earlier question: can we airmen truly justify our value to the security equation? Furthermore, do the other agencies truly understand our value and can they access our unique capabilities?

Egyptian Air Force F-16s

At a previous MEAS, the Royal Air Force of Oman gave an excellent presentation regarding lessons learned from NATO's first out-of-area combat operation in Bosnia from 1993 to 1995, and compared this operation with a potential Gulf Co-operation Council (GCC) out-of-area operation. More than forty four years after NATO was formed by a coalition the size of ours, NATO conducted their first out-of-area combat air operation known as Operation DENY FLIGHT to stop ethnic cleansing

of Bosnian Muslims. Several years later, NATO's Operation DELIBERATE FORCE helped pave the way for a comprehensive peace agreement. Both of these operations were conducted by several hundred aircraft from air forces similar to our Arab ones. Collectively, the GCC, Egypt and Jordan have about one thousand nine hundred combat weapon systems which could easily support a DENY FLIGHT or DELIBERATE FORCE-type operation. We have the aircraft, expertise and perhaps a cause, if the Iraqi government dissolves, to execute such an operation. However, we lack appropriate planning and preparation for pan-Arab out-of-area operations; what is needed is a MEAS working group to study NATO operational lessons learned and apply them to potential pan-Arab out-of-area operations. Furthermore, such planning should very definitely not be limited to warlike operations.

On 8 October 2005, a powerful earthquake with a magnitude of seven point six on the Richter scale struck Pakistan causing a major humanitarian disaster. The United Nations responded immediately but was severely impeded by the lack of fixed and rotary aircraft to deliver critical supplies and airlift victims to safe areas – fortuitously the US was able to step in and fill the gap. Over a five month period US air forces flew more than four thousand sorties, supplied approximately nine million kilogrammes of aid, treated thirty thousand patients and cleared forty thousand tonnes of debris. While we are thankful to America for this support, a pan-Arab airlift fleet would be able to do the same or much more. One hundred Arab aircraft, or a third of our available assets, flying three missions a day, over the same five-month period, could fly over forty thousand sorties. Considering the overwhelming need for airlift and air mobility throughout the region, it is hard to explain why we have not considered a pan-Arab airlift-coalition of the willing before. This fleet could be used for far more than just humanitarian missions though: it could transport chemical/biological or medical teams to affected areas, evacuate critical personnel and support peace operations. Today, the United Nations has twenty eight peace operations manned by personnel from one hundred and three nations. Of these twenty-eight operations, eighteen involve Muslim countries, many located in our own region. From my point of view, Arab airlift capability is significant but underutilized – mainly due to the lack of a pan-Arab coordinating agency – but again this does not reflect the totality of air power's offerings in this area.

Arab coalition C4ISR aircraft, unmanned air vehicles (UAVs) and helicopters are critical to unconventional roles and missions. Law enforcement officials and border police clamour for more aerial surveillance assets or 'eyes in the sky', and whilst their need is obvious, this does not mean that we should have another air force in my country. Consequently, we are working diligently to share assets across national, sector and local platoon/police levels via a major new effort called the Royal Jordanian Joint C4ISR System. However, we still struggle with two major challenges: cultural and financial. Culturally, personnel at the local level know little about the national level and are reluctant to ask for assistance. Financially, high costs of national assets limit the number of platforms suited to small ground and law enforcement forces – for instance the cost of one F16 would buy a much greater number of lower-technology assets3 – such as our locally-produced Seeker aircraft. In July 2005, the US sent an assessment team to Jordan to evaluate the Seeker aircraft which is being supplied by us to the newly re-formed Iraqi Air Force. The assessment team evaluated the effectiveness of using low-cost, fixed-wing, manned

The Seabird Aviation Jordan Seeker SBL-360A is manufactured in Jordan

aircraft to provide situational awareness to the commanders of small units on the ground, and conducted trials in the areas of convoy escort, border surveillance and maritime patrol. According to the evaluators, 'the goal of the trials was to rediscover the tactics, techniques and procedures developed to support small units during past wars but since forgotten'. Ambushes continue to inflict significant casualties on small ground units in Iraq and Afghanistan, because small units often conduct operations without the ability to see beyond natural and man-made obstructions. For patrols and convoy escort, the integration of aerial observation into ground operations can extend the 'eyes' of the small-unit commander beyond line of sight. The small units considered in the operational assessment included military platoons as well as civilian police and border control forces, and beyond the operational assessment, the DoD team assessed the feasibility of establishing a regional learning centre for continuous air presence in support of small ground units. This is an idea that we would do well to take forward on a regional level. The DoD report concludes by stating 'We believe the Seeker to be well suited to provide continuous overhead presence for small ground units conducting patrols in built up areas, convoy escort and the patrol of linear structures (eg pipelines, power lines, roads and borders). Moreover, it appears that the Seeker may be uniquely suited for these missions'.

As I have already indicated, decision makers have several options to satisfy the growing intelligence, surveillance and reconnaissance requirements of rapid-response teams, law enforcers and small military ground units. The first option involves creating a new air cadre. The second, and preferable, option is to embed airmen and equipment from extant organisations into these units. If an airman on horseback can direct precision weapons dropped from a B-52, a doctor should be able to direct a C-130 medical drop for a humanitarian operation, a border security commander should be able to request a picture from an overhead ISR sensor, a law enforcement unit in a remote location should be able to request the airlift of augmentation forces, a security official at a major national event should be able to rely on a rapid response capability – and all of them should expect to have someone who can explain what air power can do for them to be on hand. It is unreasonable to expect others to understand our capabilities and procedures. Therefore, we have to go to them with personnel and equipment. Airmen have a longstanding and proud history of embedding forward air controllers into army units. We need to do the same for those civilian and military units dealing with crises, insurgencies and a host of other unconventional contingencies. Moreover, our network centric operations, doctrines, concepts of operation, tactics, techniques and procedures need to focus on a broader network of users. Network centric operations also need to focus on integrated applications as well as integrated hardware. Our network centric architecture should be built around communities of interest based on potential future threat and crisis

scenarios, with a typical community of interest potentially comprising military, law enforcement and emergency medical and fire response teams. We need to develop low-cost, user-friendly systems that we can give to other organisations so that they can reach back to us effectively. We could co-opt existing networks and devices using commercially available technology. Airmen equipped with suitcase-sized communication suites could quickly interface with small units to deliver air mobility, information superiority and precision firepower.

Returning to an earlier point, as airmen, we need to show and tell our story differently. We tend to emphasize our value against foreign threats over all other missions, and as a result modern air forces are a victim of their own successes in speed, reach and lethality. Our ability to shorten the length of combat operations tends to sideline us in post-combat operations which are much longer in duration – we are consigned to being considered as only important in Phase 3 combat operations, rather than the critical integrator for most Phase 4 elements. Considering today's environment, we should emphasize our contributions to non-traditional missions while gently reminding our citizens of the value of our combat capability. The air power story will hold more power and more truth if we show and not just tell. By exercising and demonstrating our ability to support unconventional missions, airmen will help decision makers, opinion formers, joint, law enforcement and rapid-response teams better understand our value and how to capitalize on our capabilities. Today, misperceptions and a general lack of understanding of how to work with airmen still exist. We need to pro-actively address unconventional applications of air power before a crisis occurs. For example, we need to be able to present convincing answers to the following types of question:

How would an air coalition mount a coordinated out-of-area expeditionary force to counter a common threat, disaster or crisis? Do ground forces know how much air mobility they need and how to sequence their priorities to match our capabilities? How could air power best be used if a bird flu or other pandemic hits? What is the value of air power for major national and international events such as the holding of the Asian Olympic Games in a MEAS country? How would rapid-response teams and event managers understand and access air power's capability? The list is endless but the problem is self-evident – gaining buy-in from our new partners, and then developing better joint and rapid-response concepts of operations, tactics, techniques and procedures. Furthermore, all of these will need to be routinely exercised if they are going to be of benefit.

In conclusion, air chiefs need to be both diligent and proactive in justifying the value of air power in traditional and unconventional roles. In the unconventional arena, we need to clarify our roles against unconventional forces which use asymmetric tactics and weapons, but we also need to actively pursue unconventional roles in supporting or leading crisis response, homeland security and humanitarian operations. Lastly, we should seek unconventional ways to team together. Air chiefs should deliver a strong message to their stakeholders that non-traditional missions have risen in importance and enforce the notion that budgeting and resourcing speak louder than words. If airmen fail to do this, policy makers will shift these resources on their own accord, thereby putting our proud legacy at risk. Finally, I believe that a combined air response force in the Arab Gulf would assist us all to meet today's unconventional and conventional threats. The necessity for combined out-of-area operations to preserve our gains and protect our

people may soon be upon us. And whilst I am well aware of the political problems inherent in taking forward such an activity, it should at least be possible to undertake some joint contingency planning, particularly if we aim for a task that is likely to attract widespread support, such as a generic humanitarian airlift operations in support of the ummah[4]. This is, I believe, an opportunity that we cannot afford to miss, and I invite my fellow air chiefs to join with Jordan in seizing this historic opportunity.

Q. *On more than one occasion you have spoken of your belief in the need for the Arab air forces to work more closely together, for instance to enable a better response to humanitarian operations such as those that were required in the wake of the 2005 earthquake in Pakistan and tsunami. There is a school of thought which suggests that such activities, especially when manifested in more permanent arrangements, can lead to the building or strengthening of ties between those nations that take part – effectively assisting in the building of international institutions. Do you agree with this view, and if so how important do you think this additional element is?*

A. My hope in this area of humanitarian operations has always been that we would be able to approach this from the perspective of a 'coalition of the willing', which is particularly important as within the Middle East air grouping (the Gulf Co-operation Council states plus Egypt and Jordan) there are a wide range of capabilities. Our greatest need is to be able to institutionalise an approach that will allow for the most effective use to be made of the resources available, and here we have looked at NATO as an example of the sort of structure that we are looking for where we could set up a central staff organisation that would provide that vital co-ordinating role. Once we have the central staff element in place, they can then be used to organise exercises for instance – probably mostly involving staffs of the various air forces – in order to carry out the training necessary to generate common processes and a greater understanding of what each member can bring.

However that co-ordinating element will also be vital in terms of responding to an actual incident. For instance when the lead air force has arrived and been able to assess the situation on the ground, it will then be able to pass back a prioritised list of needs – which the central staffs would then be able to allocate to different contributing states dependant upon their resources. It also means that states can participate which might not have the assets to directly play a part in the airlift – if the priority were water for instance, then a nation which did not have a great deal of air transport might be able to provide palletised loads of water that could be collected by the aircraft of another nation. The important element is to institutionalise the processes so that we can work together efficiently and effectively.

In fact the nature of air power makes it uniquely suited for the building of bridges between nations – because of the fundamental attributes of air power. Its ability to deploy quickly, and with a very low footprint, mean that it is far easier for air forces to carry out exercises together than land forces – and such exercises are of course an excellent way to develop greater understanding and co-operation between different nations. In my part of the world air force exercises are politically far easier to organise than equivalent land exercises, particularly because of the much lower signature that they generate nationally. And because airmen of all nations share common problems and difficulties, that always helps to provide a base from which to start – we can create frameworks and mechanisms that others can then build on.

Q. *Another area that you have focussed on, which probably tends to be overlooked by Western air forces, is the opportunities that could be afforded by sharing, or making better use of via networking, assets with civil agencies such as the police and other emergency services. From your perspective, does the failure of countries to address this matter come down to the technical challenges involved or, possibly, more fundamental cultural issues?*

A. I think that elements of both are important. Here in Jordan we are introducing a major C4I programme for the armed forces, but are also planning on setting it up in such a manner that it will also form the backbone of a national C4I system that the emergency services will be able to tap into in the event of a major national emergency. Now this obviously necessitates a considerable amount of work in terms of thinking about how various databases will interface and sorting out the necessary protocols, but perhaps one of the advantages we have here is that we are effectively starting from the ground up, and hence have no legacy systems that we have to deal with. So the technology side is important, but, even where you have addressed this, you will still have cultural problems to deal with.

Here I think we are faced with 2 particular problems, and the first comes from those of us who work in uniform. We like to be self-reliant, because traditionally that has been how you ensured that you were able to deliver – but such an approach does not enable effective integration, where we should be worrying not about the colour of someone's uniform, but who is best placed to carry out the activity. The other factor, although related to some extent, is finding out where duplication currently exists - or where there are gaps in our coverage. I think that the most efficient way of addressing these problems is through the use of demanding inter-agency exercises at national level, which push the edges of the envelope in order to show exactly where such overlaps or holes exist! One final point that I should like to make in this regard is that when we do put people on the spot in such a manner, we need to be careful that when assessing their responses, and especially the decisions that they make, that we do this in the light not of hindsight, but only with regard to the information that they actually possessed at the time. A decision that may not have the best outcome may still be the result of the best decision that could be made at the time, and we need to make sure we do not end up with a blame culture dependant totally on the outcome.

Q. *Jointery is a concept about which a great deal has been written, but it is often clear that it can be easier to write about this as a concept than to achieve it. How joint do you think your own armed forces are, and are there any particular lessons that you can identify in terms of achieving a truly joint approach to military problem solving?*

A. Moving to a truly joint approach is always a slow process as it is a significant cultural change. We have had joint Staff and National Defence Colleges in Jordan for about 10 years now, and therefore have a generation of 'joint' officers who are 'trickling up' to more senior positions. However we did come across a problem during our current move to a Joint HQ, in that that my Air Force HQ were not convinced that they needed to be physically co-located, and I have had to insist that such a change is to be made – after all if we do not have the Air Force in the HQ then it will not be truly joint. More importantly, if you are not co-located then it is very difficult to build up the degree of trust and openness that is required to become truly 'colour-blind', and that in turn is needed before you can move to a proper J1 – J8 structure. And unless you are properly joint you will not develop the understanding of your brother services that is necessary to be able to produce

an effectively combined campaign plan – as I learned during my time at the RAF Staff College when we carried out our major campaign planning exercise with the Army at Camberley!

Q. *Reacting to fast developing situations requires a responsive command process, with the concept of 'mission command' generally accepted as being the way of getting best results. How do you see the 'mission command' concept developing in Arabic military cultures?*

A. I do not think that this is a particularly cultural issue, and perhaps I can best illustrate this with reference to our role in bringing aid to the civil population in Lebanon after the recent conflict there. Our diplomatic ties with Israel were crucial to being able to secure the air routes into Lebanon, both for our aircraft and those from other Arab nations – in fact we were able to get teams in to assess the state of the runway and make that operational again extremely quickly. But all of the air forces that were involved were able to rapidly replan and reorganise as necessary. You will understand that due to the political sensitivities not all nations' aircraft were allowed to fly directly into Beirut, so for the others we used Jordan as a hub where relief shipments could be cross-loaded from one aircraft to another, or where RJAF crew could join a flight so that it could be 'co-crewed' for the leg into Lebanon. There was no need for a great deal of debate, and our command system allowed us to just get on with it. Overall I would see our role here, which was absolutely fundamental to getting timely relief into Beirut, as being a classical example of just how rapidly Air Forces can respond in a crisis.

Q. *Strategic air power doctrine, which is of course mostly 'lessons learned from history', has tended in recent years to flow in one particular direction – from America out to the rest of the world. Do you think that there are perhaps regional perspectives on doctrine which would be of benefit to the broader air power community? Also, is it difficult to share perspectives other than from an air force seen as being at the technological 'cutting edge'?*

A. One of the important aspects of air power is, I believe, the unique nature of the Air Chiefs' community. Unlike army commanders, most of the world's Air Chiefs meet on a regular basis at events such as the Middle East Air Symposium (MEAS), the Royal International Air Tattoo (RIAT) and a number of other recurring events – and this makes the flow of 'lessons learned' much easier in a number of directions. However we do have a shared need to look very carefully at how we produce and use our doctrine, and to make sure that we balance our thoughts about the potential that technology offers with an understanding of the lessons that we have learnt from the past. Technology certainly can be a key enabler, but it is also possible to become a slave to the particular opportunities that it brings – and it certainly does not provide a solution to all problems, as Israel's recent campaign in Lebanon seems to show.

One of the other problems with doctrine flow is that at the moment we have one air force in the world which has a range of technologies that no other air force can match; but this means that their doctrine will not be directly applicable to other air forces as they have to work out how to employ air power without all of those capabilities – so we need to be careful about how we use doctrine, and not just dogmatically copy one particular approach.

Q. *Following on from that point, the problem of communicating the 'airman's story' is not a new one, but seems to have to be repeated in every generation. Is there something particular about air power which makes it difficult to understand intuitively?*

A. This comes down to how we view the world, and airmen certainly have a different perspective from those who operate on the surface, either on land or at sea – and in fact this works in both directions. But there is a problem in that airmen generally make up a minority percentage of the overall force structure, and therefore it is necessary for us to explain what we can do to others. But we need to ensure that they understand not only the capabilities that we bring but also the limitations, and in promoting an understanding of air power we must ensure that we do not oversell ourselves or leave them with unrealistic expectations. What we must develop is a joint understanding so that we can concentrate on finding the best asset to carry out a particular task, and not worry about which service it comes from. The problem is that if you do not understand something, it is easy either to ignore it or to misinterpret its capabilities.

Q. *Your background and current position – a keen military aviator, long-time member of the Jordanian Armed Forces, and member of the Royal Court – undoubtedly give you a unique view of both the world and air power. What do you think are the main contributions that air power could make towards achieving peace and stability in this particular region?*

A. I am a firm believer that the unique capabilities of air power can, if properly used, play a tremendous role in this field. As I have already mentioned, air forces are uniquely able to work together, and through joint exercises and deployments are able to lead in creating bridges between nations. And a growing emphasis on the unconventional use of air power – for areas such as humanitarian operations or intelligence in support of the emergency services – also help to create a drive towards international institutions that produce frameworks and mechanisms which also encourage greater dialogue, debate, and therefore understanding. These I think are the aspects which we need to concentrate on building, as a means of developing that shared understanding which is essential to producing any longer term solutions. So as in most areas, whilst air power cannot provide a complete solution, it can leverage its particular attributes in order to provide the greatest possible contribution to an overall resolution.

Notes

1 Nations that participated in MEAS 06 included Jordan (who hosted the event), Bahrain, Egypt, Oman, Quatar, Saudi Arabia and the UAE, plus representation from the UK, USA, France and Turkey.
2 Command, control, communications, intelligence, surveillance and reconnaissance.
3 In fact it would pay for around 50 Seeker aircraft.
4 The world-wide extended community of Muslims.

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The B1-B can carry 81,500lb Mk-82 bombs internally

Combat Air Power in Irregular Warfare:

Operational utility, the lack of narrative and risk of strategic failure

By Wg Cdr Harry Kemsley

To make war on rebellion is messy and slow, like eating soup with a knife.

(T.E. Lawrence, Seven Pillars of Wisdom)

Although based on significant debate with colleagues within and outside the Service, the views expressed in this paper are personal and do not necessarily reflect the opinions and policies of the UK MoD or the Royal Air Force. The author has completed a larger study, supported by King's College London, which has explored further the ideas expressed in this short paper among many other related issues. An unclassified version of the larger study is expected to be made available mid-2007.

Abstract
Historical and contemporary military experiences have been increasingly dominated by non-conventional forms of conflict. The enduring military ethos, essentially based on a conventional approach to warfare, may well have ensured that we were prepared for a war, and preparing for the possibilities of future war, but it seems, we have remained ill-prepared for the most likely war. If the stunning, conventional victory of Operation Iraqi Freedom in 2003 has confirmed the former two, the rude shock of the subsequent insurgency has underlined the latter.

After establishing the contemporary strategic context and the ever more vital nature of perceptions and 'narrative' in the so-called 'Information Age', this paper describes the broad implications for military operations. This background forms the basis for a review of Air Power (AP) activities against contemporary, irregular adversaries generally, and those by Combat Air platforms more specifically.

Based on extensive real-world data, the conclusions show that AP can and does deliver significant operational utility, particularly when fully integrated with Land forces. Moreover, it does so both with and without resorting to destructive force. However, its employment, if not carefully explained in the information environment, can present risks to the more strategic aims of the contemporary mission. It is proposed here that information has primacy in modern Irregular Warfare. Consequently, rather than a focus on greater precision or shorter response times for Combat AP per se, we need to invest more time in developing a successful Influence Strategy to win the War of Narratives.

Aim of Paper
The aim of this paper is to illustrate the range of roles in the full spectrum of activities that make up Combat Air Power (AP), their potential utility and risks in contemporary Irregular Warfare.[1]

Caveats and Definitions
Delivery of AP in a Joint Context
Whilst this paper does, necessarily, concentrate on the contributions made by AP to the military endeavours in Irregular Warfare, it does not contend that AP should be regarded as a stand-alone capability. AP is a Joint tool, able to provide independent effect if required, but is more often fully integrated in the Joint military enterprise. The important part of discussing AP's contribution to Irregular Warfare here is not which service is best suited for operations, but how to use AP 'in conjunction with other forms of military [and civil] power.'[2]

Combat AP Focus
Despite the significant contribution made by other types of Air and Space asset, this paper will focus primarily on Combat Air platforms. The roles of other Air platforms such as those used for Strategic or Tactical Mobility (including helicopters), Space-based or Air Surveillance and Reconnaissance, will be discussed only briefly.[3]

In a period of high operational tempo, relevance to contemporary security challenges is likely to be a key evaluator. Against a back drop of budgetary constraints, the debate may well be the most acute for the less-well-understood relevance and utility of Combat Air assets, which must therefore be the priority here.

Small Wars and Stabilisation Operations against Asymmetric Opponents
Terms and definitions for non-conventional forms of warfare abound. Western militaries have used terms such as 'Small Wars', 'Military Operations Other Than War', 'Low Intensity Warfare', 'Asymmetric Warfare', 'Stabilisation Operations', 'Counterinsurgency' and so on. If presented on a notional Venn diagram, the definitions of these terms could be depicted as overlapping ellipses covering an operational arena of what this paper will term 'Irregular Warfare'. Thus, the term irregular is used here in an 'exceedingly inclusive' sense, referring to all types of non-conventional methods of violence, including terrorism, employed to counter the traditional capabilities of a more regular opponent.[4]

For the purposes here, the threats posed by irregular opponents are equally inclusive. Irregular threats would include illicit acts of a military, political, psychological, and economic nature, conducted by both indigenous and non-state actors for the purpose of eliminating or weakening the authority of a local government, or influencing an outside power. Though primarily asymmetric in nature, irregular adversaries are therefore intended to include the broad range of insurgents, guerrillas, terrorists, and similar groups and organizations that operate in and from the numerous weakened, rogue and failed states that exist today.[5]

For some, overly broad definitions may lose utility, perhaps even blurring the distinction between conventional and non-conventional conflict. However, a key facet that segregates the large-scale, conventional wars, from their irregular, non-conventional counterparts is the shift in focal point, from predominantly military factors to more human ones:

Military operations become the focus of any conventional war, [but] in a small war the military dimension of the conflict is generally overshadowed by political, social, economic and psychological concerns[6]

For the purposes here the notion of Irregular warfare will be defined as follows:

The [Irregular Warfare] concept does have a usefully unambiguous core meaning. Irregular Warfare is warfare between regulars and irregulars.[7]

Scope
The paper is in 2 parts[8]. First, the broad strategic context and the vital nature of information and 'narrative' will be discussed in order to understand the contemporary dynamics for military

operations generally and here, more specifically for AP. The principle is that context changes with time. Consequently organisations must constantly analyse context and ask themselves 'So what?', 'How does that affect what we are doing now, and in the future?'

Second, the shape, emphases and results of Air Power's employment in contemporary Irregular Warfare will be illustrated to highlight the broad spectrum of roles and utility of AP. The intent is to demonstrate with examples the diversity of AP roles planned for and employed, and thereby, to describe an alternative view of AP's utility in Irregular Warfare than might be widely recognised or understood, above all for Combat Air platforms.

Finally, conclusions will be drawn to challenge, in particular, the modern-day airman. It is imperative that we better understand AP's full contribution to contemporary operations and any risks associated with them before we expect our colleagues in the Joint environment to do so.

Part 1: Narrative and Modern Irregular Warfare

Introduction

Given the prominence of Irregular Warfare in both historical and contemporary experience one could be forgiven for wondering whether that which is currently called 'irregular' should actually become known as the 'regular' form of war. In modern military operations, the regularity of such 'wars amongst the people' also appears to be increasing.[9] From early in the 19th Century until 1980 almost half the violent international conflicts were so-called 'small wars', a subset of what is defined here as Irregular Warfare.[10] A brief review of 'on-going' wars reveals that over 90% of recent and current conflicts could be categorised as 'irregular'.[11] For example, uniformed personnel deployed by the UN on peacekeeping missions for largely non-conventional scenarios, rose from approximately 48,000 in November 2001 to 81,000 by October 2006. The projected total for the end of 2006 was 83,500, which was expected to continue to rise at an 'alarming rate' in the coming years.[12]

To some, the apparent increase in non-conventional conflict is not a coincidence. The end of the Cold War in 1991 is said to herald the arrival of a Post-Ideological era of warfare, where the '…largely bi-polar ideological competition has been re-framed in a blend of ideology and belief-systems through an increasingly diffuse adversary set.'[13]

The 'Great Confrontation' of the Cold War could be viewed as a period of unrelenting Irregular Warfare. Military interventions to suppress or support irregular forces were justified on grounds of 'socialist solidarity or protecting democracy and human rights.'[14] More recently, the removal of at least one half of the global-control mechanism between the 2 superpowers is said to have allowed the emergence of latent irregular conflicts; particularly in the Balkans and parts of Africa.[15]

Other analysts have explained recent military experience as the emergence of a 'Fourth Generation' of warfare (4GW).[16] Although not without detractors, 4GW

is traced to the post-World War II period, as major powers attempted to retain their control over colonies and captured territories.[17] Unable to withstand direct engagement with the conventional strength of their adversaries, 4GW irregular opponents use tactics of secrecy, terror, and confusion as part of a broad psychological, 'force-on-mind' approach to overcome the physical capability gap they face in the 'force-on-force' arena.[18] Historical examples of 4GW would include Mao's concept of the People's war, The Intifada (I and II) in Palestine, and Ho Chi Minh's conduct in the Indochina Wars.[19]

Notwithstanding explanations of the enduring and apparently increasing prominence of irregular conflict, two implications are undeniable: Western armed forces must focus on, and learn from, their experiences in this form of warfare.[20] Unfortunately, the conservative nature of the military culture and an apparent focus on conventional conflict undermines the necessary adaptations.

> *Irregular warfare is a distraction from preparations for major conflict… and readiness for the big war is believed to ensure competence in the small war. For these and other reasons, military doctrine has maintained a division between 'real war' and [Irregular Warfare].*[21]

A military ethos based principally in a conventional approach to conflict may well have ensured that we were prepared for a war, and preparing for the possibilities of future war, but in all likelihood, we have remained ill-prepared for the most prominent war. The stunning, conventional victory of Operation Iraqi Freedom in 2003 appears to confirm the former two; the 'rude shock of the subsequent insurgency'[22] appears to have underlined the latter.

> *Studying the past has a way of introducing humility…because it suggests the continuity of the problems we confront and the unoriginality of most of our solutions for them.*[23]

Despite being involved in predominantly non-conventional operations throughout almost its entire history[24], the RAF has seemingly failed to capture and retain the many lessons and 'best practice' identified from such experience.[25] Although now perhaps starting to change, modern UK AP doctrine offers only the briefest glimpses of the complexities of modern Irregular Warfare. Statements in emerging operational concepts suggest the need for 'agility across the spectrum of conflict' implying an acknowledgement of Regular as well as Irregular forms of warfare. However, such concepts fail to explain, to the same extent, the military implications and operational challenges of the latter.[26]

The inability or unwillingness to identify and learn lessons from previous, similar experience has also been apparent in modern conflict. Perhaps the significant increase in urbanisation, technological advances in precision weaponry and Unmanned Aerial Vehicles, and the non-stop advances of instant global communications undermine any considerations of 80 year old AP solutions to contemporary irregular challenges. Yet, the continuities are more plentiful than are the changes. For example, in 1924 as the British Government attempted to quell rebellious tribes in Iraq, the High Commissioner Sir Henry Dobbs sent

the following guidance to his local Commander-in-Chief, and subsequently Marshal of the RAF, Sir John Salmond:

> *A situation may frequently arise in which the capture or killing of a specified offender or offenders would have a good effect, while the indiscriminate bombing of non-combatants associated with such offender or offenders would have a bad effect. The Air Forces are unable to select and identify with precision the persons who are to be the object of their attack or to affect a capture. They cannot distinguish between age and sex… If the Air Officer Commanding considers that he cannot secure the end at which I have asked him to aim by the use of ground forces with or without aerial demonstrations and that the dropping of bombs from the air is necessary, I then have to decide whether I should prefer to abandon the end indicated rather than to attempt to secure it by bombing.*[27]

The reason for the political guidance stemmed from an adverse Parliamentary reaction to the heavy casualties from recent Air and Land operations, which were 'not easily defended in the public eye'.[28] Some of the lessons from this historical experience are clear, endure today and can be found in extant military doctrine. For instance, the realities of political constraint on military actions that can and are driven by perceptions and consequent sensitivities to media portrayals of events; that military forces and their political masters must be seen to act precisely, proportionally, and with restraint; and the risks of 'bad' strategic outcomes potentially outweighing any prospective 'good' tactical outcomes from a military activity. However, other lessons are less obvious and are perhaps of even greater significance today than before. For example, if otherwise legitimate, precise and justifiable military operations are poorly represented or explained in the public eye, it is less likely they will be understood and may ultimately undermine rather than support the political objectives.

This paper will illustrate that contemporary AP can and does deliver significant operational utility in Irregular Warfare, particularly when fully integrated with Land forces; an aspect of AP employment that has been repeatedly demonstrated throughout military aviation history. Moreover, it will be shown that Combat AP, perhaps the least well understood participant, delivers the operational advantages of speed, flexibility and apparent ubiquity predominately without resorting to destructive force. However, as will be explained through a description of the contemporary strategic context and the modern primacy of information, despite the clear operational utility of Combat Air platforms, their use as with all forms of military power can present risks if not carefully explained in the information environment through an effective engagement in the battle of narratives.

Contemporary Strategic Context

The contemporary strategic context has been dominated by 2 'epoch making' events. First, the end of the Cold War, which coincided with or energised the prominence of Irregular Warfare as discussed above; and second, the terrorist attacks against the American World Trade Centre on 11 September 2001, heralding the advent of what the US called the 'War on Terror'.[29] Nonetheless, within the apparent

flux of the modern conflict there are a number of enduring characteristics and established trends.[30]

Unpredictability and the Tyranny of the Now
Warfare remains the province of uncertainty, an intrinsically human and thereby, unpredictable and diverse phenomenon. Contemporary military forces must focus on the 'tyranny' of the many irregular challenges immediately to hand. However, the 'tyranny of the now' cannot completely overshadow preparations for other, perhaps more conventional, potential confrontations and the ever present likelihood of strategic 'Shocks.'[31]

Tyranny of Constraint
The use of the 'minimum necessary force' is an enduring characteristic of Western war-making theory and doctrine. For modern Irregular Warfare it is a vital one.[32] Constraint and proportionality must guide military actions as fundamental principles not only because they are founded in the Laws of Armed Conflict, but also to demonstrate the legitimacy of any military actions taken and the political intent directing them. Even under considerable provocation, when perhaps a more punitive, less restrained military response might have been called for in previous years, contemporary Western governments have constrained their military forces. For example, following the 9/11 terrorist attacks, Operation Enduring Freedom experienced very significant controls from the Coalitions' governments despite sometimes placing severe limitations on the command and control process, and created significant frustration for the local military commanders.[33]

Globalisation, Primacy of Information and the Tyranny of Real Time
Globalisation has enhanced the mobility of resources, people and information, with a concomitant spread of wealth, multiculturalism and ideas.[34] In parallel, the emergence of global information technologies has enabled the real-time coverage of almost any act, no matter how small or significant, local or distant. In the contemporary context the primacy of information and the sensitivity of policy makers to it, stems from the speed of delivery, their inability to control any associated interpretations and the potential influence over perceptions and understanding of world events.[35] The broadcast of:

> *…heart-rending and visually striking anecdotes, and even the historically miniscule levels of casualties which Western forces now sustain have become neuralgic pressure points when distraught relatives routinely parade their grief in millions of living rooms around the world.*[36]

It is the ability of any act in the physical domain, as selected by media editors, to be immediately reflected in the global information domain that amplifies the event and proposed outcomes.[37] It is the potentially distorted amplification in the modern information realm that brings ever more pressure for constraint from military commanders and restraints placed upon them by their political masters.[38]

However, the issue here is not just the constraint on activity, or how actions are ultimately perceived, but also the translation process: from the 'language' of the physical act to that of the informational realm. Every commander who has complained about negative

press coverage will know there are no controls over who translates either their activities into information or the narrative they attach to it. Similarly, there can be no control over who else seeks to influence that translation.[39]

However, the misinterpretation of military affairs is by far a new problem. Military commanders and their political masters have long been aware of the importance of 'propaganda'. General Sir Frank Kitson characteristically noted in 1971 that:

> *Firm reaction in the face of provocation may be twisted by clever propaganda in such a way that soldiers find the civilian population regarding their strength as brutality, and their direct and honest efforts at helping to restore order as the ridiculous blunderings of a herd of elephants.*[40]

Rather, it is the primacy of information, the speed of its creation and transmission, and the battle of narratives subsumed within it, which must focus not only the political leadership but also the minds of contemporary military commanders. There will remain an element of conventional war making in all forms of conflict. However, as will be discussed in the next section, the competing narratives between irregular and regular opponents are at the heart of our ability to gain and maintain 'Campaign Authority'[41] and establishing ourselves as the legitimate alternative to our adversaries. Through our actions, words and inactions we must not only capture the hearts of our target audiences, they must also convince their minds.

Narrative: It's the Story Stupid[42]
In current UK doctrine, achieving and maintaining perceptions of legitimacy and popular consent are considered part of establishing Campaign Authority. Such an objective has been recognised as a key endeavour for creating the necessary environmental conditions for success in modern warfare.[43] As with any political venture however, success is ultimately concerned with exerting your will over others through some means of influence. Whatever the means employed, our 'Influence Strategy'[44] for Irregular Warfare must convince the indigenous and wider audiences of our Campaign Authority; that we truly represent a 'Force for Good' and a legitimate alternative to the stark version of the world represented by our irregular opponents.[45] Equally, we must convince our adversaries there is more to be gained from 'good behaviour than bad.' [46]

Campaign Authority and Trust
In any human interaction, achieving consent, a subjective construct based on perceptions and belief, is a function of trust.[47] In the perceptions of the relevant target audiences, where our actions demonstrate our 'benevolence', 'competence' to deliver security, and 'predictability'; and our words demonstrate 'transparency' and 'honesty', it has been proposed we would gain the required trust and consent.[48] By extension, such actions and words would support the achievement of Campaign Authority. Conversely, where our actions were perceived to be detrimental to the local population, personal security was deemed to be in near constant jeopardy, or their expectations of our actions were seldom met, the target audience would be unconvinced and unlikely to trust us.

However, as discussed earlier, it is not just our actions and words that are at

stake here, but also those of third-parties. The dynamic interplay of all parties' activities in the physical and information domains play a vital and interdependent role in achieving trust, consent and eventually, Campaign Authority. While controlling the activities of third parties, particularly in the information domain, is impossible to any practical extent, controlling our own activities and ensuring we explain ourselves adequately should not be.

Information Operations, Media Operations and Credible Explanations

One of the key criticisms of Western military forces in recent conflict is the emphasis placed on physical actions and an insufficient explanation of the rationale behind them in the information arena.[49] Military Information Operations[50] essentially focus on an adversary, the degradation of their will, decision making and associated information systems, and the simultaneous protection of the same for friendly forces. Consequently, the responsibility to represent military activities in the public domain falls to Military Media Operations[51], which although often timely and accurate have been described as too 'clinical'[52], and can be overly focussed on the tactical use of force. For example, media depictions of Combat AP activities are often concerned only with destructive engagements as seen through an officially released cockpit video for example.[53] Official media broadcasts of AP's employment are accompanied by unclassified scripts that highlight aspects such as military targeting procedures and precision munitions, both aimed at minimising collateral damage, and the adherence to given rules of engagement.

> *In general [during the conflict against Hezbollah in the summer of 2006], Israel endeavoured to keep its military actions proportionate to the threat in legal terms. However, the Law of Armed Conflict does not shape perceptions nor shape extant international value judgements.*[54]

Where a given military activity is accompanied with convincing images and narrative describing the threat posed by the target for example, as well as the restraint shown in the engagement, our explanations may become more compelling. Whilst the observance and description of mandated constraints are necessary features of our demonstrable legitimacy, in the absence of other credible explanations that engage and persuade the target audiences, they are not sufficient.

Narratives to Neutralise Conventional Asymmetry

Contemporary irregular opponents have been described as viewing the information realm as the key battleground.[55] As such, exploiting opportunities in the information domain becomes the vital part of irregular forces' Influence Strategy, as defined here.[56] The use of physical acts of violence becomes merely a means to coerce opponents indirectly, through information and the fear and uncertainty it can create. The enhanced sensitivity of Western audiences and their governments is manipulated to produce negative attitudes towards the apparent chances of success. Any media coverage of alleged atrocities or mistakes of the regular military forces are magnified by the narratives broadcast by irregulars and can have further disproportionate impacts on opinion.[57] Thus, the aim for the irregular is to indirectly neutralise the physical advantages

Israel launched a series of bombing raids into Lebanon after Hezbollah forces crossed into Israel, killing three soldiers and abducting two more, a move the Israeli prime minister called an 'act of war'

the conventional opponent holds through the power of information over perceptions, opinions and ultimately political decision-makers.

The recent 2006 Israeli-Hezbollah conflict provided evidence of the importance of an effective delivery of information and engagement in the 'battle of narratives' rather than an almost exclusive focus on military activities in isolation.

> *As the Israeli Air Campaign continued to escalate against targets that were militarily valid but that sometimes involved high levels of collateral damage and uncertain tactical and military effect [their media information systems were] ineffective and often unintelligible. [Moreover, the delivered Israeli narrative of events] failed to explain the scale of the Hezbollah threat in defending its actions and did nothing to diminish the victim status of their irregular opponents.*[58]

The regional and international populations were also 'bombarded' by a vivid counter-Israeli narrative, in part instigated by the political arm of Hezbollah as well as the Palestinian authorities. Though the outcome of the conflict was undoubtedly affected by more than just the narrative battle, anti-Israeli military rhetoric quickly dominated the propaganda interchange. Whilst the Israeli government saw the departure of its Defence Chief, and commenced special investigations into what went wrong; the reputation and Campaign Authority of its military forces have also been damaged.[59]

The apparent mismatch of Western military forces' focus on physical activities and the adversaries' primary attention to information-based activities may be a significant weakness in contemporary Western Irregular Warfare strategy.

> *The effect insurgents have on the information environment is comparable to the ripples that dropping a large stone into a lake causes. Long after the stone has hit the bottom, the residual effects expand in all directions, are difficult to stop, and ultimately crash into the banks of the lake. Current U.S. counterinsurgency strategy focuses on the splash of the stone (the Physical Environment), and not enough on stopping the ripples (the Information Environment) before they reach the bank - the enemy's strategic Physical Environment objective.*[60]

Clearly it would be imprudent to enter into public debate concerning all aspects of military operations, such as our limitations and constraints, for fear that adversaries would identify opportunities to abuse them. However, the reluctance to engage in almost any effective debate or explanations about, for example, our perceptions of the

threat and the consequent courses of action taken, allows others to interpret our actions for us. Moreover, if the unopposed third-party interpretation is delivered with an adversarial narrative it may undermine the perceptions of our actions and potentially reduces trust, which erodes the very Campaign Authority we seek to achieve.

Mobilising Narratives

Finally, unfettered exposure to a one-sided narrative, such as portrayals of apparently 'disproportionate' collateral damage caused by AP, can also present other more strategically diffuse security concerns.[61] Diasporas within Western communities can be radicalised through the power of such messages, recruited to irregular causes and even conduct terrorist acts, both on domestic ground such as the July 2005 London bombings[62], or further afield.

> *Convicted Bali bomber Imam Samudra, when asked for reasons why he had helped plan and execute the attack that killed 202 civilians in Bali, mainly Australians, replied that it had partly been in response to the thousands of [collateral] Afghan civilian deaths that had been caused by Operation Enduring Freedom in October 2001.*[63]

Mobilising narratives can be viewed as a rationale that enables irregulars to offer potential recruits an explanation for any felt grievances. Similarly, misinterpretations of ideologies have provided justification for illicit and terrorist acts.[64]

Thus, the irregular opponent through effective use of narrative can, not only neutralise our endeavours in the physical realm, but also negate our Campaign Authority in the informational realm of perceptions. In addition, an effective narrative can mobilise latent support, drawing sustenance for irregular organisations. If the irregulars' interpretation of events is to be revealed for its true substance, it is essential that we enter the 'narrative Battlespace' in the virtual or informational realm with the same vigour and precision that we attempt to use in the physical domain.[65] Clearly, not all parties will be convinced by our narrative. However, without an effective counter-narrative and overarching Influence Strategy, public opinion may rest principally in the hands of media interpretations and the narratives of our adversaries.

Implications for Military Operations

The implications for military operations from the broad and interrelated issues described above are both numerous and complex. In the interests of space however, only 3 will be briefly discussed here: first, the implications of uncertainty and 'force balance'[66]; second, the military contribution to the envisaged counter-narrative and Influence Strategy; and third, the increasing importance of intelligence, surveillance and reconnaissance (ISR) capabilities in modern Irregular Warfare.

Uncertainty and Force Balance

Choices concerning an acceptable force balance to meet current and future challenges are made based on a myriad of factors, not least available resources and assessments of the most likely and most dangerous courses of action by potential adversaries. However, the rate of change in the strategic context, particularly in the last 2 decades, and the length of modern procurement cycles can bring earlier decisions concerning the delivered military make-up into question. Nonetheless, in the words of the former US Secretary of Defense, Donald

Rumsfeld, and as has been the case throughout military experience, 'you go to war with the Army you've got… not the Army you might want or wish to have at a later time.' [67]

In contemporary operations regular militaries must use the force balance available to the best of their abilities. Where, as is the case today, the forces were procured more for conventional operations, but are facing irregular challenges, risks may have to be taken and their employment may need to be non-conventional. As we shall see in Part 2 of this paper, in the case of Combat AP there is evidence that this is already happening to useful operational effect.

Military Operations and the Contribution to Counter Narrative

Where attaining Campaign Authority is the focus of a successful Influence Strategy, all operations, civil and military, must be coherent with the chosen counter-narrative. However, as described for the recent Israeli experiences, an Influence Strategy is made up of coherent actions and explanations, a physical and virtual language, which must enhance the perceptions of our intent, convince allies and neutrals of our legitimacy, and coerce opponents toward desired behaviour.

Military Precision and Available Means

In military doctrine frequent mention is made of the need for precision in military targeting to demonstrate and enhance our legitimacy. The imperative for precision is also underlined for the employment of Combat AP in modern Irregular Warfare.[68] However, precision is generally only discussed in association with the discriminate and accurate delivery of lethal force.[69] The delivery of precise destruction demands that enormous endeavours are undertaken to reduce the inevitable risk of collateral damage to the maximum extent practicable.[70] But even the damage caused on the authorised target, however small, may be rapidly transmitted throughout the global information realm, with or without negative interpretation by irregular adversaries. Moreover, the legitimacy we seek through discrimination and accuracy need not relate solely to destructive means. For example, if we seek to disrupt or deter belligerent behaviour, the timely arrival and/or presence of military forces can and has been sufficient.[71] Thus, where a range of means are available to achieve a desired effect, precision now becomes a function of discriminating the potential target, and accurately applying the most appropriate means, be that destructive force or otherwise.

Revolution of Rising Expectations

An ability to achieve precision, in itself, will create rising expectations that it will be achieved. As our ability to employ more precise means increases and collateral damage levels fall, so the threshold of that which will be deemed 'acceptable' will necessarily fall. Accidents, for example, that may have previously passed unnoticed or been more readily excused become unacceptable. Add the modern amplifying effect of the real-time, global media glare and there can be said to be a contemporary revolution in rising expectations of greater discrimination and lower collateral damage.

Time-Sensitive vs Mission-Sensitive Targeting

The apparent focus on lethal precision is also often accompanied with an emphasis on the need for speed in reaction and delivery, for example through so-called 'time-sensitive targeting'.[72] Modern operations, enabled by sophisticated communication and networking

technology, can shorten the time from detecting a potential target and delivering a response with unprecedented concision. Whilst the validity of shaving seconds from an activity performed in a war that will last years has been questioned by scholars and military academics,[73] a key issue should be to ensure there is time for 'judgement'.[74] Questions of the likely impact on the broader, strategic mission must be weighed against the often more tactical imperatives associated with targeting. Where potentially rapid and precise lethal actions, can be nonetheless portrayed negatively on a wider scale we risk undermining our legitimacy at the strategic level. In Irregular Warfare, 'mission-sensitive targeting' may be a more appropriate focus than the time-sensitive variant mentioned above.[75]

Contribution to Counter Narrative

The inference here is not that destructive force can never be justified, or that military commanders must 'walk on eggshells unable to act for fear of bad press'.[76] Equally, it is not being proposed that lethal capabilities that will allow commanders to seize opportunities against useful, but often fleeting targets, have no lasting utility in contemporary irregular operations. But rather that due consideration must be given to the range of means available to achieve a given end. Moreover, due deliberation must be given to how actions in the tactical arena might be understood in the wider domain from all perspectives; what necessary information actions might be required to mitigate any possible negative impact, or enhance the positive ones; and fundamentally therefore, how the actions might impact the overarching military mission of legitimacy and Campaign Authority.[77]

Clearly, the need to weigh up numerous, perhaps subjective factors in the minds of commanders can consume time and reduce 'tempo'.[78] Traditional military doctrine emphasises the need for achieving greater tempo than our adversaries, initially to pre-empt any actions taken by them and ultimately to paralyse the opponent as they become overwhelmed by the relative speed of our actions. However, the greater speed described in the conventional understanding of tempo risks overemphasising physical actions against adversaries and under playing the need for wider considerations in the narrative Battlespace of, for example the perceptions of allies and neutrals.

Thus, military operations will support a successful Influence Strategy through an understanding of the balance of risks, an intelligent use of appropriate means and tempo, and sufficient explanation or accompanying counter-narrative. Furthermore, where the simultaneous achievement of tactical objectives and the maintenance of demonstrable legitimacy are deemed to be unlikely, commanders may have to overrule the use of force except in the most extreme circumstances. In the words of a current senior RAF commander,

> *Airmen must manage the risks and NOT be afraid to take operationally necessary ones. Nonetheless, whilst the use of force is not necessarily the last resort, it must always be the most cerebral one.*[79]

From Overwhelming Force toward Overwhelming ISR

Thus, in Irregular Warfare, precision becomes knowing that there are a range of means available to achieve a given end, and the intelligence (in both senses) to know when, where and why to use them and then how to explain actions taken.[80]

Traditional Irregular Warfare doctrines describe, among other objectives, the need to reduce the freedom of manoeuvre of the adversary, to 'drain the swamp'.[81] Most frequently, the physical freedom of manoeuvre is considered in relation to the precise targeting of communications and support infrastructures, key individuals and storage facilities for example. In this context, the ability to be accurate and discriminate in your actions requires that you can find and identify a target, track its movement where appropriate and then be able to bring appropriate means to bear. However, as is increasingly acknowledged in contemporary military operations, detection, discrimination and tracking are onerous tasks, particularly in urban areas, placing an enormous emphasis on the capabilities of guiding reconnaissance and surveillance support, data exploitation and intelligence dissemination networks.

However, in the contemporary context as described here, the irregular opponent must be denied freedom-of-manoeuvre in the information domain as well. As many of the illicit actions as possible that are undertaken by the irregular must be seen, explained and exposed.[82] Much of the misinterpretations of friendly activities, world events or ideologies through global and local media channels need to be detected, rebutted and legitimate alternatives offered, thereby denying the irregular adversary the strategic impact he seeks through the narrative war. This places another very significant task on the civil and military intelligence services and their information counterparts.

Thus the need for physical and virtual precision in our counter-narrative, places considerable emphasis on not only our military surveillance and reconnaissance capabilities (in the physical and information domains) but also on an all-source , inter-agency, intelligence, processing and dissemination infrastructure. In such an environment, the more traditional emphasis on achieving 'overwhelming force' in military operations might need to be balanced with the additional need for 'overwhelming ISR' in the contemporary irregular fight.

F/A-18C Hornets fly over the USS Enterprise during Operation Southern Watch

Part 2: Combat Air Power, Narrative and Modern Irregular Warfare

Introduction

In the modern context, the achievement and maintenance of Campaign Authority have been described in Part 1 as centring on factors such as perception, legitimacy and trust. The military implications include the need to act with mission-sensitivity, while explaining our actions effectively and exposing those of our opponents. In turn, the judgement, precision and restraint demanded of contemporary military

commanders have underlined the need for intelligence, both informational and cerebral. Against this foundation, the contribution made by, primarily Combat AP to the 3 interrelated issues of restraint, precision, and intelligence will be described here before briefly reviewing the relevance of more conventional AP roles to contemporary irregular operations.

The details and methodology used to create an empirical database, which is at the heart of much of the analysis behind the tabulated data presented in this and the subsequent major section, is beyond the scope and classification of this paper.[83] The database includes thousands of missions spanning non-lethal, non-kinetic and kinetic Combat AP activity in conjunction with contemporary ground operations from several real-world Theatres of operations during randomly selected but consecutive 3 month periods of 2005/6. The results or effects of the Air activity held in the database and therefore the conclusions drawn in this analysis were derived largely from the views of the soldiers and their commanders involved.[84]

Restraint

Our ability to achieve desired effects without resorting to destructive force may not only enhance the perceptions of our activities and intent, but also our legitimacy. The aim here therefore, is to examine the tasking of Combat AP when employed in conjunction with Contemporary Land operations.

Extant UK AP doctrine identifies 6 Core Air and Space Roles.[85] Of these the actual employment of Combat AP could be categorised predominantly within Integrated Air Operations (IAO). Table 1 illustrates the range of tasks[86] performed by Combat AP within the IAO role[87] across 3 distinct types of employment: kinetic, non-kinetic and non-lethal activities.[88]

The most striking aspect of these statistics is that during the study samples 78% of all Combat AP sorties conducted, did not use their available destructive potential performing non-kinetic tasks only, and less than 1% of sorties resulted in the employment of destructive means. The dominance of non-kinetic activities and the almost total absence of kinetic employment is perhaps all the more surprising when considered in the light of the more virulent media coverage of Combat AP's use, as will be discussed again later. Nonetheless, if restraint is a necessary part of legitimacy those commanders controlling AP's employment appear to understand it.

Ultimately, the use of any military power must achieve the required outcomes whether restrained or not. To some, the lack of destructive employment may appear to undermine the case for the cost-effectiveness of Combat AP. However, it is the contention here that an activity, as set by the ground commander in the cases considered here, which achieves its aim precisely and without the use of destructive force is more likely to enhance and support the Campaign Authority of friendly forces than where the reverse is true, all other things being equal. Moreover, where the outcome desired is deterrence or disruption and a non-kinetic means is employed, the deterrent or disruptive effect more likely to be achieved where the belligerent being targeted perceives a credible threat. In other words, a SHoF conducted by an Air Transport platform, for example, unable to kinetically

destroy the target is unlikely to deter as effectively as the aircraft expected to be carrying weapons, such as a Combat Air platform.

Combat AP Employment (Type & Role)		Role Sub-Totals	Type
Type	*Role:IAO - Tasks*	%	%
Non-Lethal	EW	17	21
	Information Relay	4	
Non-Kinetic	Armed Recce (incl NT ISR)	52	78
	Armed Escort	1	
	Air Presence	4	
	SHoF	21	
Kinetic	Ordnance Employment	1	1

Table 1: Combat AP Range of Tasks Performed by 'Type' and 'Role' – Integrated Air Operations (IAO) – in Contemporary Irregular Warfare (Source: Combat AP Joint Effects Database)

Precision

Precision lethality is a well documented feature of modern Combat AP and will not be further annotated in this paper. The ability to destroy targets with minimal ordnance and collateral damage is a clear aspect of demonstrable proportionality and thereby, legitimacy. However, precision in the modern context has been described in Part 1 of this paper to require a range of means, destructive and non-destructive, which if accurately applied might deliver a given desired outcome.

An examination of the broad spectrum of variables that might constitute the profile of Combat AP mission begins to illuminate the flexible potential of this military instrument and the precision with which it can and has been applied. Although only an example, the key here is to understand that the many variables shown at Figure 1, such as 'purpose', altitude 'profile', 'posture', can not only be varied by mission to achieve a specific outcome, they can be dynamically varied on each pass over the target. A Combat Air Platform can loiter within audible and/or visual range with suitable height ('medium low' altitude profile shown at Figure 1) to act as a deterrent to belligerents and, simultaneously, reassure the local population that it is 'safe to vote at the democratic elections', for example.[89] Equally, for a more discrete operation the aircraft can be held at sufficient range to both respond in required timescales without having been seen or heard and, with the appropriate sensors, deliver an intelligence feed to the on-scene commander in real-time.

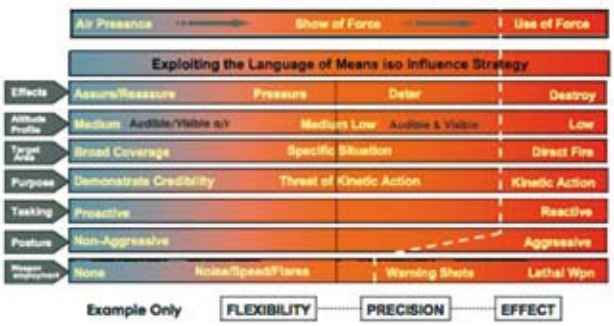

Figure 1: Example of Combat AP Spectrum of Employment or Language of Means in support of (iso) an Influence Strategy. (Source: Combat AP Joint Effects Database)

Thus, the ground situation can and does directly and dynamically determine the manner in which the Air asset is employed through judicious use of the range of options available. The spectrum of Combat AP means is now shown to stretch from non-aggressive, re-assuring Air Presence tasks, though more threatening Shows of Force (SHoF) to the infrequently used destructive

potential. Insofar as we communicate our intentions as much by our physical activity and inactivity as by what we say, this AP spectrum of means becomes a physical language of means available to support the desired Influence Strategy. Where we seek to convey re-assurance to one target audience and coercive pressure upon another, the posture, profile and presence of the means employed need only be varied accordingly. Given the range and speed of Combat Air platforms this can offer the Joint Commander a responsive and flexible, wide-area instrument to support desired effects or outcomes. Moreover, dynamically exploiting this spectrum could offer considerable precision to the on-scene commander if applied intelligently.

Before continuing the 'intelligence' contribution of Combat AP it would be useful to review the degree to which the platforms are re-tasked once airborne and into what alternative mission types and tasks. An examination of the 'airborne re-tasking' statistics from the after-action reports of ground commanders and aircrews involved, summarised at Table 2, suggests that this is a prevalent aspect of Combat AP's integration with Land operations.

Table 2: Combat AP Airborne Missions Re-Tasks by 'Type' and 'Role.' (Source: Combat AP Joint Effects Database)

Airborne (Re-) Tasked Mission Averages by Combat AP Employed (Type/ Role)		Sorties on Mission	Sorties Re-Task	Kinetic Re-Task
Type	*Role:IAO - Tasks*	%	%	%
Non-Lethal	Electrical Warfare (EW)	99	1	0
	Information Relay	14	86	0
Non-Kinetic	Armed Recce (incl Non-Traditional ISR)	42	58	1
	Armed Escort	1	99	1
	Air Presence	11	89	3
	Show of Force (SHoF)	98	2	2
Kinetic	Ordnance Employment	88	12	

Table 2 describes the degree to which Combat Air platforms are re-tasked during a given mission. For example, Armed Reconnaissance missions for Combat AP are not only a significant task overall (>50% of total activity, from Table 1), but also a particularly dynamic one with over 58% of tasked missions being re-tasked to other activities once airborne.

Unsurprisingly given the tiny proportion of kinetic missions overall (<1% of the total at Table 1), there are very few kinetic re-tasks for Non-Lethal and Non-Kinetic sorties once airborne (<2% of the total number of the missions shown at Table 2). Equally, given the usually specialised nature of the Air platforms involved, very few of the EW sorties are re-tasked dynamically (<1% shown at Table 2). However, the Non-Kinetic missions are frequently given alternative tasks once airborne as may be expected given the nature of the tasks involved. Table 3 examines the frequency and type of airborne re-tasks specifically applied to the employment of planned Armed Reconnaissance missions (Armed Recce is re-tasked on approximately 60% of occasions). Either, using their own sensors, the Combat Air platforms involved detect potential targets and immediately interface with ground commanders to relay the information (42% of Armed Recce airborne re-tasks shown at Table 3), and/or they can be ordered to perform the wide variety of 'Air Presence' and SHoF profiles described above, against the same or other nominated targets (>50% of Armed Recce airborne re-tasks shown at Table 3).[90]

Armed Reconnaissance Missions		Airborne Re-Tasked Armed Reconnaissance Missions		Re-Task (Ave)
Type	Role:TAO - Tasks	Type	New Tasks	%
Non-Kinetic	Armed Recce (Incl NT ISR)	Non-Lethal	EW	1
			Information Relay	42
		Non-Kinetic	Armed Escort	1
			Air Presence	7
			SHoF	48
		Kinetic	Ordnance Employment	1

Table 3: Airborne Re-Tasked Armed Reconnaissance Missions. (Source: Combat AP Joint Effects Database)

Therefore, contemporary experience suggests Combat AP not only offers flexibility and precision across a range of means, but is frequently used as such with significant numbers of sorties being employed across a variety of airborne missions. Furthermore, when fully integrated with the Land element, the activities of the Air platform can be tuned to requirements of the ground situation.

Intelligence

Accurate and timely intelligence that increases the commander's understanding or 'resolution' of his environment is of prime importance to all warfare not just irregular forms. The ostensibly restrained, flexible and potentially precise nature of Combat AP employment described above fundamentally rests on the decision makers involved receiving the information they need, when they need it. Air Power platforms have proven to be remarkably useful in this regard both in terms of their traditional and non-traditional employment for ISR purposes, and their ability to cross-cue vital information to other systems in near or actual real-time.[91]

Environmental Resolution: Traditional and Non-Traditional ISR

The traditional ISR tasks for Combat platforms include Armed Reconnaissance and Tactical Reconnaissance.[92] In contemporary operations, the reaction to any located target is generally completed with or instigated by a ground commander. As described earlier, in modern, non-conventional operations, once Combat platforms have relayed the target information they can be called upon to complete additional, kinetic or more frequently, non-kinetic tasks such as Air Presence or a SHoF to maintain contact and/or pressure on the target until another agency can respond more directly.

In recent experience, the use of non-specialist Air assets in the conduct of Non Traditional ISR (NT ISR) has emerged as an evolving capability.[93] NT ISR tasks are conducted primarily by Combat Air platforms, taking advantage of spare capacity with on-board sensors (including the 'Mk 1 eyeball') to provide imagery intelligence to other agencies or even simple radio transmissions to confirm target details.

Although yet to be formalised in doctrine, the NT ISR process has become an integral part of the information collection process and is normally conducted alongside the formal ISR collection management process using common procedures where appropriate. The key feature here however, is that NT ISR collection requests are fulfilled by an NT ISR capable platform whilst transiting to, from, or holding overhead, an operating area. By refining the areas over which these assets fly, it is possible to combine a primary mission, for example providing Air Presence, SHoF or even kinetic Close Air Support cover to Land operations, while conducting pre-planned NT ISR tasks. The priorities for pre-planned or opportunity NT ISR tasks can be set in response to a Land Commander's Air Support Request, and

can be dynamically managed through the appropriate Air/Land integration cells or the on-scene commander with his supporting Tactical Air Controller.

The benefits of the additional, non-traditional source of environmental resolution are evident. However, it is important to stress that the lack of specialisation in some of the equipment used in the NT ISR task can lead to, for example, lower imagery definition than would be produced by a specialist sensor. In addition, the inability to manipulate data in flight or conduct post-mission analysis of the same can limit the utility of this capability. Nonetheless, the dynamic multi-tasking of Combat AP in both target response and detection roles is a key advantage of these Air vehicles; an advantage that perhaps becomes unique when considered with the range and speed over which such capabilities can be applied.[94]

Information Force Multiplier: Cross-Cue Data Link

The relay of information, often in real-time, has immediate relevance and benefit to the operational commanders. In addition, this is probably one of the most valuable global contributions made by Combat AP to Land operations in contemporary irregular warfare. Where previously Land units might have had to deploy numerous ground elements to patrol and detect belligerent activity, it is possible to employ Air support to lessen this burden.

Whilst the technology involved like that associated with NT ISR is far from a panacea, when integrated adequately in the planning of Joint military operations, it can add significant useful resolution and also mitigate the operational risks associated with low Land Force density. For example, Space-based and other non-Combat Air platforms that can detect movement, patterns of life and changes, alongside their non-traditional counterparts with their capability to detect and react to targets, offer a considerable ISR armoury to complement the Land effort; again, particularly when considered against the apparent ubiquity and persistence of modern Air systems.

Conventional Air Power Roles: Rapid Global Mobility and Control of the Air

Before completing this section, it is worth briefly tackling the broader relevance of AP to contemporary operations through 2, more conventional roles: 'Rapid Global Mobility' and 'Control of the Air.'

Rapid Global Mobility

The global reach of AP, particularly when combined with tactical Air transport and Support helicopters, underpins the capability for a rapid concentration and sustainment of potentially massive firepower at strategic range. In so doing, AP can enable not only a potentially smaller Land footprint but also bring coercive pressure to bear on an adversary without unduly raising the risks to own forces. The force-multiplying effect of AP delivered by platforms from outside the Theatre of operations, for the relatively small number of Special Forces in Afghanistan, would be a recent example.[95] Equally, with Strategic Airlift capabilities available light Land forces can be rapidly deployed, potentially deterring further aggression; or an established expeditionary force can be sustained without the need for excessive exposure to surface threats.

However, a less traditional perspective on the ability to rapidly employ AP on a global scale also highlights aspects that may be pertinent to our desire to support a successful Influence Strategy. ISR assets, particularly the unmanned variants, enjoy the type of range and persistence that allows their use for potentially coercive purposes. It was stated earlier that a successful Influence Strategy should not only place appropriate emphasis on judgement in the use of force and the need to explain our activities, but also expose the activities of our adversaries. An early deployment of suitable ISR means, perhaps with stand-off from their actual target, in the full glare of world opinion could bring significant pressure to bear on adversary decision-makers and strengthen our counter-narrative through the provision of useful evidence.[96] As such, the Rapid Global Mobility of ISR can be viewed as providing Coercive ISR'. Moreover, such coercion underlines AP's ability to be employed as a 'Force-on-Mind' capability, which does not have to be restricted to purely tactical engagements using kinetic or non-kinetic force.[97]

Finally, intentions are also harder to portray as ominous when global mobility forces are employed to bring food, clothing, and medical supplies to indigenous populations facing natural disasters. Equally, where civilian populations are in peril, the ability to evacuate them with extraordinary speed can further underline positive perceptions.

> *During November 2004, the UK needed to mount a short-notice Non-combatant Evacuation Op in the Ivory Coast. From conception to execution took 5 days…By the time all aircraft and personnel had returned to the UK…In total some 212 individuals were evacuated to [a place of safety].*[98]

Humanitarian efforts, although usually called for only in the face of unforeseen events that clearly cannot be created to suit, when supported by rapid Air and Sea strategic mobility provide significant support to our counter-narrative strategy. In addition, they can undermine the corrosive attempts by modern adversaries to misconstrue our actions.

Control of the Air

The UK AP principal Standing Home Commitment Military Task is the protection of UK sovereignty and security at home. The UK Airspace Security task objective is 'to provide a continuous Recognised Air Picture (RAP) and an Air Policing capability, providing for the interception and possible destruction of rogue and hostile aircraft, to maintain the integrity of the UK's airspace'.[99]

> *For western nations, the counter-air role surely continues to deserve its classic doctrinal primacy, in the new context of ensuring that nothing like September 11th happens again. Hi-jacked airliners are only one potential means by which adversaries could exploit the enormous reach and destructive power of air vehicles – combat aircraft and cruise or ballistic missiles could be just as effective, especially if armed with the weapons of mass destruction around which so many fears currently revolve. Air defences need to reach an unprecedented level of effectiveness if they are to move beyond their historical achievement of imposing unacceptable marginal attrition on attacking forces, and to provide instead a near perfect shield against strikes which*

might come at any time and in any form.[100]

With such a National task, the relevance, priority and utility of Combat AP can be unquestioned. However, the Control of the Air implied in the Standing Home Commitment has equal applicability to the support of contemporary operations overseas as it does in UK sovereign airspace.[101] The use of rogue aircraft tactics is an equally likely prospect against national interests overseas, including friendly military forces, as it is at home. The use of Combat AP platforms in the myriad of roles already described which are also capable of dynamically reacting to the hostile use of civilian aircraft presents yet another dimension to their operational utility.

Effectiveness of Combat AP

Notwithstanding the restrained, flexible and potentially accurate nature of Combat AP, if it does not produce the required outcome, it cannot be seen as effective. Without tangible, discernible outcomes from the application of the capability, question marks over its relevance and utility will persist.

Exactly as discussed earlier, much of the concern over Combat AP's role in Irregular Warfare centres on concerns over demonstrable legitimacy through perceptions of a disproportionate use of destructive force. In October 2002, a Times correspondent wrote of the rising resentment across the Moslem world following the perceived indiscriminate use of Combat AP in Afghanistan:

We want no nonsense about precision weapons and surgical strikes… Aerial bombardment is never proportionate, measured or targeted. It has evolved a logic of its own, an escalation of horror similar to that unleashed by the terrorist. Like all distant and indiscriminate violence, it breeds a violent response. It is the dumbest weapon of war. At present the bombing is likely to increase anti-western hysteria in the Middle-East…[102]

The article was later corrected by the correspondent in the light of the rapid conclusion of hostilities, and the subsequent explanations of the operations that had taken place. Indeed, the operations became widely acclaimed and underlined the highly effective contribution of precision AP supporting the relatively small number of ground troops in the removal of the Taliban regime. Nonetheless, it exemplifies the manner in which AP activities can be misperceived, poorly represented and therefore, often misunderstood. In addition, it also demonstrates how to correct misrepresentation through achieving a successful outcome, ensuring an effective engagement in the argument and the provision of credible explanations for the battle of the narratives.

The evidence presented earlier suggests that kinetic power is most often withheld in contemporary operations and that considerably more effort is expended using the non-lethal and non-kinetic prowess of Combat Air platforms. Even if the statistics are a reflection of nothing more than a reluctance to use kinetic force, this still leaves unanswered the question of the effectiveness of the non-destructive activities. Moreover, if the latter can be shown to produce tangible results, then military commanders could more explicitly consider, employ and explain such AP techniques in operations against irregular opponents.

The data available for this paper will be presented in 2 arenas: the apparent operational utility and efficacy of non-destructive Combat AP use, and the potential impact of ineffective engagement in the Information Domain to fully explain the same.

Operational Utility

For the purposes of the analysis completed here only discernible or reportable outcomes were recorded as positive results. For example, where a ground commander requested a SHoF and could determine to their satisfaction that the ongoing belligerent activity had ceased as a result, a positive 'Disrupted' effect would have been recorded. However, where during an Armed Escort task for example, the convoy being escorted was not attacked and in the minds of the convoy commander or their Tactical Air Control Party (TACP) this could not necessarily be attributed to the assumed 'Deterrent' presence of the Combat AP an uncertain outcome was recorded. Equally, if for example an escort aircraft re-tasked with SHoF passes over a nominated target had been unable to complete it, a negative outcome was recorded.[103]

Although not discussed individually here, all positive missions were categorised as having achieved 1 of 4 effects: Detected, Deterred, Disrupted or Destroyed.[104] Table 4 summarises the available data for Combat AP missions that were reported to have achieved 1 or more of the 4 positive, discernible tactical outcomes. The results thus presented at Table 4, neither intend to prove causality between a given task and outcome nor establish rigorous statistical correlation that might be used to predict accurately future outcomes. Rather it is proposed that where a positive outcome has been discerned once it may be again, and where this occurs on sufficient occasions it becomes worthy of note and further investigation.

Discernible Tactical Outcome by Combat AP Employed (Type/ Role)		Task Effect	Type Effect (Ave)
Type	*Role:IAO - Tasks*	%	%
Non-Lethal	EW	4	20
	Information Relay	30	
Non-Kinetic	Armed Recce (incl NT ISR)	40	30
	Armed Escort	20	
	Air Presence	3	
	SHoF	60	
Kinetic	Ordnance Employment	90	

Table 4: Discernible Tactical Outcomes for the Employment of Combat AP by 'Type' and 'Role: IAO - Tasks' (all data to 1 significant figure). (Source: Combat AP Joint Effects Database)

From Table 4 it is apparent that whilst all Combat AP activities have greater than zero discernible tactical effects, those associated with SHoF and Ordnance Employment have the greatest percentage of positive outcomes (shown as 'Task Effect' at Table 4). However, such a conclusion could probably be predicted given that these activities are the most integrated with the Land element, generally focused against a specific incident or target of interest, which would allow the observer to have an obvious steady state to measure any changes against. Consequently, any positive outcomes would not only be more readily discernible, there would usually be people there to watch for them. Although this is less likely to be the case for the other non-destructive mission types, several of the non-

destructive activities also had sufficient impact on their environment for these to be recorded by the ground commander concerned (seen as >20% discernible, positive outcomes for the Non-Lethal and Non-Kinetic Types of mission at Table 4), as will be discussed further shortly.

Armed Reconnaissance, described earlier as one of the more dynamic and flexible activities is also one that apparently delivers useful outcomes. For example, through its principle mission of 'Detection', and the re-tasking categories shown at Table 3 covering all 3 types of employment, Armed Reconnaissance missions achieved a mixture of all 4 outcome categories on approximately 40 percent of all missions analysed.

Other non-destructive activities, such as EW missions or Air Presence in Table 4, appear to have almost no discernible tactical outcomes. However, when the nature of the tasks involved and their likely flight profiles are considered, it is perhaps surprising that any positive outcomes are recorded at all. Looking at Air Presence for example, the chance that a tactical Land commander can associate these broader ranging activities with any specific, tactical event is difficult to explain. However, 2 other aspects need to be considered: first, the outcomes of the re-tasked missions for Air Presence sorties, which are as varied as those shown for Armed Reconnaissance; and the need for a higher level perspective of this mission. The following overview of the use of Air Presence to support the Democratic Election Process in Afghanistan October 2005, serves as an example of the greater clarity that can be gained for the operational utility and effectiveness of some Combat AP activities only from a broader viewpoint.

During the Spring of 2004, the Combined Joint Task Force-76 (CJTF-76) worked closely with a number of Air planners to use Air Presence missions to support the Land operations against the anti-coalition militia and preparations for the forthcoming elections. The aims of the Presence missions were three-fold: provide force protection (FP) to friendly forces in their operating areas, pressurise the militia forces by keeping an Air Patrol over them, and to offer a level of 'reassurance' to the local civil populace during the build-up to the democratic elections.[105]

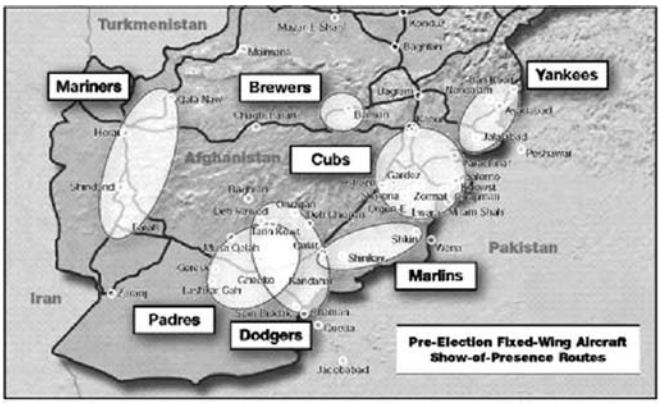

Figure 2: Combat Air Patrol – Air Presence and SHoF – Routes for Afghanistan Election 2004 (taken from Field Artillery 2005)

During planning it became clear that the FP of friendly forces would require aircraft to operate over unpopulated areas and would require a careful allocation of assets to maximize the required coverage and an equally careful selection of Combat Air patrolling points to meet the required reaction times for the various objectives. Simultaneously, Combat Air Presence missions would be required over the populated areas.

The compromise selected was the nomination of Air Patrolling points

and connecting Air Presence routes (see Figure 2). Minimum operating altitudes were set for different aircraft with maximum Presence time limits to ensure that whilst the visual and audible presence might be felt in the major cities it would not be perceived as overbearing. Conversely in known militia areas away from dense population the aircraft were tasked to posture themselves more aggressively whilst remaining cognisant of the potential ground-to-air missile and small arms threat. When away from both population centres and militia areas, the aircraft climbed back to normal cruising altitudes. The Air Presence plan was executed during the build-up phase with increasing intensity and then throughout the election itself.

Although no specific data has been recorded with regard to particular tactical events that can be attributed to the presence of the Combat AP during this period, the higher level CJTF HQ assessed the activity to have been a significant factor in the success of the elections, as the following paragraph from their after action report states.

> *Feedback on the shows of presence from the ground was almost immediate. The local populace conveyed to civil affairs and provincial reconstruction teams the feeling of safety they received from the air presence over their cities and villages. Freedom of movement for locals to carry out their daily activities without the threat of attack was a great burden lifted from their shoulders. The realization that coalition Forces were in Afghanistan to help protect its citizens, ridding them of terrorists who had tormented them and their way of life for so long, truly had sunk in. Additionally, with this increased force protection, coalition elements moved freely on their presence patrols with little harassing fire or engagement from the enemy. The immediate results validated the tremendous psychological effects air presence can have. Even without the coalition's employing munitions, the anti-coalition militia respected the quick-strike capabilities and devastation [Combat AP] can produce when incorporated into a ground manoeuvre plan…as a visual presence and the ultimate deterrent.*[106]

Engage in the Argument

A key theme throughout this paper has been the need to acknowledge the importance of perceptions and trust when military commanders make judgements about the manner of delivery and/or actual use of force. Earlier, trust was described as resting on an individual's belief that an organisation is competent to complete its mission, predictable in behaviour, benevolent in intent and honest in their portrayal of events around them, whether good or bad. Proponents of 4GW suggest that it is in this virtual or psychological battleground that contemporary adversaries operate, attempting to undermine our legitimacy with a corrosive, anti-Western narrative, and thereby influence the decision makers and radicalise followers. Perceptions and beliefs are clearly very complex psychological facets of human behaviour, made up of countless variables that adapt and interrelate in response to other equally fathomless stimuli. Nonetheless, it is exactly these countless and immeasurable factors that must be addressed if the hearts and minds of target populations are convinced of or coerced by our argument and actions.

However, if the factors to be addressed are complex, the ability to assess how we

are progressing toward our goal in such a 'human' domain has proved equally elusive to contemporary commanders.[107] Two techniques to be considered here are the reviews of polling data and media monitoring.

Polling Data

The attitudinal information contained at Table 6 and Figure 3 is an average from a period during and following the dates of the first Combat AP sorties, analysed and discussed above, for one of the regional populations. Although only a single sample of opinion data, the overwhelming impression of both polls is the negative outlook of the local indigenous populace toward the future of their country (>40% of people questioned believed the country was 'heading in the wrong direction' as shown at Figure 3).

Iraqis who believe attacks against British and American troops are justified	**45% (65% in Maysan province)**
Iraqis 'strongly opposed' to presence of Coalition troops	**82%**
Iraqis who believe coalition forces are responsible for any improvement in security	**<1%**
Iraqis who feel less secure because of the occupation	**67%**
Iraqis who believe conditions for peace and stability have worsened	**43%**
Iraqis who do not have confidence in multi-national forces	**72%**

Table 5: Iraq Attitudinal Survey (Source: The Brookings Institute 'Iraq Index' dated 17 January 2006)

Of particular concern for establishing trust and thereby consent to Coalition Campaign Authority, are the poor perceptions of personal security (approximately 70% as shown at Table 6) and low confidence in the competence of Coalition forces (<1% as shown at Table 6). Concerns over the validity of polling methods and results notwithstanding, the apparent strength of feeling described by these data is undeniable. However, earlier analysis suggested that in the application of Combat AP at least, Coalition military forces had been conducting operations in a restrained, precise and apparently legitimate fashion, and had been seen to be operationally effective.

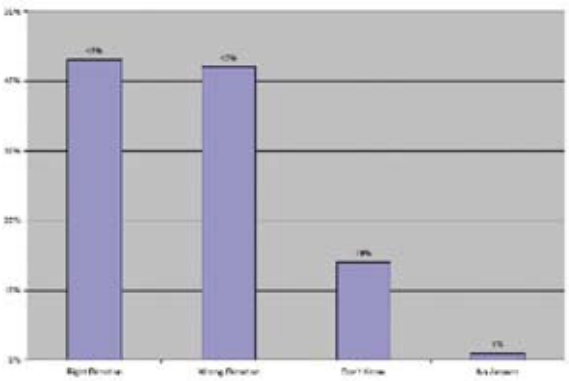

Figure 3: Iraqi Population Answers to the Question: Do you think Iraq today is generally heading in the right or wrong direction? (Source: The Brookings Institute 'Iraq Index' dated 17 January 2006)

Evidently, the insinuation here is not that the operational application of Combat AP during the subject period, in isolation of any other military or civilian factor, had a dramatic impact on the strategically important opinions of the local population. Rather that any perceptions of AP would need to be seen in this strategic context. Moreover, any application of force from the air or otherwise would need to similarly reflect on the apparent lack of trust and perceived legitimacy the Coalition already had at this time before conducting further operations in a manner that may deepen the issues further. If achieving Campaign

Authority is a key enabler to success in Irregular Warfare these statistics suggest that at the time of the empirical study behind this paper and the polling data presented here, it had still yet to be accomplished, much less maintained.

Media Survey

Numerous organisations have significant experience in the monitoring of text and broadcast media in support of operations. In the UK the MoD studies articles supplied by the BBC's monitoring centre and extracts sections of the texts that meet specific criteria according to a given project or Campaign's subject interests. Each extracted section can then be tagged with an appropriate category label from the criteria list.

Of particular interest is the labelling and subsequent analysis of what sentiment is being expressed about a topic and who is expressing the sentiment. A simple histogram, for example, can then be used to display the ways in which the sentiment towards people, organisations or topics changes over time.[108] Using such assessments in combination with other indicators, politicians and their military commanders can gauge change and progress in the attitude of the populations they seek to influence.

Although no media monitoring report concerning specifically AP employment over the analysis period, or subsequently, is available, a short review of the articles in only the Western press and the sentiments expressed within them can be sobering enough for AP practitioners. For example, the assertion in the Lancet Mortality report of October 2004 that:

> *Making conservative estimates… air strikes from coalition forces accounted for most violent deaths. We have shown that collection of public-health information is possible even during periods of extreme violence. Our results need further verification and should lead to changes to reduce non-combatant deaths from air strikes.*[109]

The report may have been merely coincident with, or perhaps precipitant to, a number of articles concerning the use of Combat AP in contemporary military operations. A common theme in the subsequent articles appears to have been surprise or even incredulity at the lack of information available to explain the activity and the apparent lack of critical analysis of the use of Combat AP. For example,

> *One of the least reported aspects of the U.S. occupation of Iraq is the oftentimes indiscriminate use of air power by the American military. The Western mainstream media has generally failed to attend to the F-16 warplanes dropping their payloads of 500, 1,000, and 2,000-pound bombs on Iraqi cities - or to the results of these attacks. While some of the bombs and missiles fall on resistance fighters, the majority of the casualties are civilian - mothers, children, the elderly, and other unarmed civilians.*[110]

In the face of such reporting, U.S. Central Command Air Force (CENTAF) publishes daily AP summary reports that detail Air activity. Unfortunately, their lack of detail allows them to be criticised for:

> *…underemphasiz[ing] potentially damaging information like the fact that bombing runs … are regularly conducted in heavily-inhabited areas of Iraq's cities and towns where the resistance may also be strongly embedded.*[111]

After a list of AP sorties flown on a given day, the CENTAF statements simply describe Coalition aircraft activity as supporting Iraqi and Coalition ground force operations or state that the Air platforms are focused on creating a secure environment for upcoming parliamentary elections. For example, in the analysis period CENTAF summaries included commentary such as:

> *...46 air missions over Iraq flown in order to provide support to coalition troops, infrastructure protection, reconstruction activities and operations to deter and disrupt terrorist activities. Air Force F-16 Fighting Falcons, an MQ-1 Predator and Navy F/A-18 Hornets provided close-air support to coalition troops in contact with anti-Iraqi forces near Balad and Ramadi.*[112]

Although these daily tabulations offer some account of the Combat AP employment they lack the degree of explanation required to underpin and promote positive interpretations of the activities; not least where any ongoing legitimacy deficit is being underlined by negative media accounts such as the examples above. It is insufficient to simply record raw statistics and offer no credible and detailed account of what occurred and why. Equally, footage of a kinetic strike against an alleged adversary without a narrative to explain the action in the manner shown allows other to fill the information 'void' on our behalf. If we wish to win the argument and defeat irregular adversaries, we need to become more compelling, more transparent and more convincingly engaged in the battle of narratives, not just fast and lethally precise.

Conclusions

> *Military operations and the field of battle are governed by three influences - luck, opportunity and unfairness.*[113]

In a battle of ideas or narrative, Western conventional force and technological advantages cannot be relied upon in themselves to provide the solutions. Success in Irregular Warfare is no more about speed of action and lethal precision per se, than it is the ability to bring force to bear on force. Fundamentally, time taken to judge more precisely whether tactical actions are appropriate will pay greater dividends in the more strategic 'Long War'.

The hard won and preciously guarded liberal values of Western society come with their own tariff. For example, military interventions in third-party countries almost by definition must be seen as illiberal; freedom of speech encourages the likelihood of radical thought, individual interpretation and permits the often supposed media bias; and the need for political consensus to underpin legitimacy are all features of a liberal society. However, achieving a legitimate political mandate for intervention almost inevitably will lead to compromise solutions, vague military objectives, and tighter political constraints than military commanders might prefer. Nonetheless, in the face of recurring setbacks in contemporary Irregular Warfare and the occasionally withering media coverage of the military operations that accompany them, commanders could be excused for feeling as though they have run out of the luck, would prefer more opportunities to take the initiative but that, fundamentally, 'unfairness' dominates the modern military experience.

Evidence presented here suggests that Combat AP when closely integrated

with Land operations can and has been employed with considerable restraint, precision and military effectiveness. Moreover, there is a very broad range of discrete and dynamically variable actions available with the presence of Combat AP that would be unavailable in their absence. The modern Combat Air platform offers kinetic, non-kinetic and non-lethal types of activity to help the tactical commander detect, deter, disrupt and where judged necessary destroy nominated targets.

Equally, when used judiciously, Combat AP can deliver significant though perhaps less tangible operational advantages to the Joint military endeavour. For example, through AP's speed, range and apparent ubiquity it has been shown here to multiply the apparent Land force-density and help mitigate risks associated with low force numbers. For example, when employed in direct support of the 2004 Afghanistan Elections, Combat AP was seen to provide considerable 'soft' effect as well. The positive impact on local and wider opinion was identified and underscored by regional Coalition commanders.

Nonetheless, modern attempts to exploit the operational utility of both restrained non-destructive and destructive power does not appear to translate well into improved perceptions of military interventions generally or Combat AP specifically. Attitudinal polls and media surveys reveal a significant disapproval of almost any military intervention. However, they also reveal a lack of understanding or even mistrust of the same.

The attainment of Campaign Authority has been described here as a central objective in modern warfare. Such an achievement demands attention to not only our physical acts but also those we take in the information domain if we are to gain and maintain the trust of those we seek to convince and coerce those who seek to defeat us that there is more to be gained from non-belligerence. However, to change perceptions, convince the minds and capture the hearts of our target audiences, and coerce an adversary, the physical and virtual language of our actions and words must be both precise and compelling. Precision in such a context becomes more than simply accurate destructive targeting. To be compelling, demands a sufficient understanding of those watching and listening to you. Only through striving to gain such an understanding of not only our adversaries but also those yet to be convinced or turned against us will we be compelling.

However, judged on the examples given in this paper of the military attempt to inform and explain its actions, it should perhaps not be surprising that misperceptions and misrepresentations about the same flourish. In the absence of any alternative explanation, that presented by the often anecdotal media and our adversaries must eventually become seen as the legitimate version of events. Where the same military interventions are conducted in a context of an initial 'legitimacy deficit' the balance of risks between military imperative and strategic impact become all the more crucial, but so does the need to effectively engage in the argument.

Restrained actions through adherence to even stringent Rules of Engagement and Collateral Damage Estimates are a necessary but not sufficient function of success in the modern information-dominated context. Israel saw its war with

Hezbollah as just, but was apparently ineffective at justifying the same to the wider audiences and did little to reverse the 'victim' status of the Lebanese people. Equally, the difficulties Israel faced in the narrative battle were hardly reversed by statements from the IDF Chief of Staff as serious as the threat to 'turn back the clock in Lebanon by 20 years.'[114]

Thus, the need for an overarching Influence Strategy becomes paramount. In the contemporary context information dominates many aspects of both civilian and military life. An effective Influence Strategy cannot be regarded as an 'enabling' activity in the same way as air-to-air refuelling enables longer airborne missions and therefore greater 'productivity'. The need to influence, convince and coerce different key audiences simultaneously must drive the actions and words of modern commanders as key drivers of strategy, tactics and execution.

> *To make war on rebellion is messy and slow, like eating soup with a knife.*[115]

Given the enduring regularity of our involvement in the suppression of 'rebellion' we should have considerable corporate experience to draw from in the military arena. The evidence presented here for the operational utility of Combat AP suggests some of the operational lessons are being learned and put into practice, particularly when employed non-destructively and fully integrated with Land activities. However, in the hearts and minds of ourselves and the populations we seek to convince, the war remains messy and slow, and strategic failure looms.

Clearly, much of the apparent 'mess' is the carnage and destruction wrought by our adversaries. But at least part of the problem may also be the Western military focus on these physical activities rather than the informational power they are really designed to wield. Trust has been described here as resting on an individual's belief that an organisation is competent to complete its mission, predictable in behaviour, benevolent in intent and honest in their portrayal of events around them, whether good or bad. However, beliefs are perception based and predominantly shaped in the informational realm not just through physical acts but through an effective Influence Strategy. Thus, it is the contention here that until we become more compelling in both deed and words real progress will remain slow, we will fail to achieve the Campaign Authority we seek, and never graduate to eating soup with a spoon.

Notes

1 For the purposes of this paper 'Combat AP' will be defined as all aircraft, helicopter or unmanned air vehicles capable of delivering destructive and/or disruptive force which a military formation can apply against an opponent at a given time.

2 Owen, RC. Col., USAF, 'Aerospace Power and Land Power in Peace Operations: Toward a New Basis for Synergy', Airpower Journal (Fall), 1999.

3 See Elder, R. Wyn Major, USAF, 'The Role of Non-Lethal Airpower in Future Peace Operations - Beyond Bombs on Target', Air University, Maxwell, 2003, for a broad review of the non-combat AP capabilities in a non-conventional context.

4 Gray, CS., 'Another Bloody Century', Weidenfeld & Nicolson, 2005, pg 214.

5 The definitions described and used here accord closely with the extant USMC doctrine for operations against irregular threats. The author is grateful to Lt Col Lance McDaniel, USMC who has been responsible for much of his Service's doctrine re-write in this area, for access to his emerging drafts and re-drafts in the recent 2 years.

6 Corum J, and Johnson W, 'Airpower in Small

Wars: Fighting Insurgents and Terrorists', Lawrence: University of Kansas Press, 2003, p 5.
7 Gray, CS., 'Another Bloody Century', Weidenfeld & Nicolson, 2005, pg 215.
8 It is understood that the Air Power Review will see this whole paper split around the 2 parts described here.
9 Smith, R., 'The Utility of Force; The Art of War in the Modern World', Allen Lane, 2005
10 Small, M and Singer, D, 'Resort to Arms', Beverly Hills: Sage Publications, 1982, p 55-60.
11 The review completed here was far from exhaustive; rather it was intended to be representative of the comparative incidence of Regular and Irregular Warfare (to 1 significant figure). The sources used were the UN Peace Keeping online site (www.un.org/dept/dkpo) and Banks, AS., ed., 'Political Handbook of the World. 5th ed.', Binghamton, NY: CQ Press, 2004. For a comprehensive list of historical and contemporary warfare see for example Lee, R. 'The War List', 2006 (available at www.historyguy.com/War_list.html).
12 UN Military Planning Service of the Dept of Peacekeeping Operations, 'Uniformed Personnel in UN Peacekeeping: 1991 – 2006', DPI/2444, 10 November 2006.
13 Kan, Paul R., 'Webs of Smoke: Drugs and Small Wars', Small Wars and Insurgencies, vol. 17, No2, 148-162, June 2006
14 Ibid.
15 Smith, R., 'The Utility of Force; The Art of War in the Modern World', Allen Lane, 2005
16 Lind, WS., et al, 'The Changing Face of War: Into the Fourth Generation', Marine Corps Gazette, October 1989 or see for example, Hammes, TX., Col (ret'd) USMC, 'A Sling and a Stone', Zenith Press, 2004, for a more recent application of the 4GW concept.
17 Echevarria, AJ., 'Fourth Generation Warfare and Other Myths', Strategic Studies Institute, Carlisle, PA, November 2005.
18 Interview with Air Vice-Marshal C Moran OBE MVO MA BSc RAF, Assistant Chief of the Air Staff on 29 January 2006.
19 Hammes, TX., Col (ret'd) USMC, 'A Sling and a Stone', Zenith Press, 2004
20 Freedman, L., 'The Transformation of Strategic Affairs', International Institute of Strategic Studies, London (Adelphi Paper 379), 2006.
21 Ibid.
22 Sabin, P., 'Using History to Understand Contemporary Conflicts', History Teaching Review Year Book, Edited by Andrew Hunt, Vol. 20. 2006.
23 John Lewis Gaddis, 'The United States and the End of the Cold War: Implications, Reconstructions, Provocations', New York: Oxford Univ. Press, 1992, p. 3.
24 For a historical review see for example, Towle, PA., 'Pilots and Rebels: the Use of Aircraft in Unconventional Warfare 1918 – 1988', Brassey's, 1989.
25 Significantly, an initiative to address this issue in the wider Joint context has begun in the UK with the release of an interim, 'Joint Doctrine Note' entitled 'Countering Irregular Activity' that seeks to open the debate towards a UK Joint perspective of Irregular Warfare. Nonetheless, to date no Irregular Warfare doctrine for UK AP exists. To the extent that doctrine captures 'best practice' and non-conventional operations dominate contemporary experience this will need to be addressed. Also, see Nagl, JA., 'Counterinsurgency Lessons from Malaya and Vietnam: Learning to Eat Soup with a Knife', Praeger, 2002, for an enlightening comparison on how 2 militaries in 2 conflicts apparently differed in their ability to learn from earlier mistakes.
26 See for example, Directorate of Air Staff, UK MoD, 'Future Air and Space Operational Concept', available at http://www.raf.mod.uk/downloads/documents. The concept, although arguably conceived more for conventional warfare, appears adaptable to, and has potential for success in a more irregular arena as well. However, several challenges remain to be explored and overcome if the concept is to realise its potential. See Kemsley MBE, MH., Wg Cdr RAF, 'Agile Mission Groups and Netwar: Challenges for the Future Operational Concept of the RAF', World Defence Systems, Issue 15, 2006 for a fuller discussion of these issues.
27 PRO Air 5/338, UK High Commissioner Sir H Dobbs to Air Officer Commanding, 1924.
28 Nils Naastad, 'RAF, Prudent Air Power and the Fear of History', Ch10 of 'British Air Power' edited by Peter W Gray, HMSO, London, 2003

29 Sabin, P., 'Using History to Understand Contemporary Conflicts', History Teaching Review Year Book, Edited by Andrew Hunt, Vol. 20. 2006.
30 Ibid.
31 A strategic 'Shock' is defined as a high impact, low probability event. An example of a military Shock might be the US-European de-coupling and low European defence spending, which could enable or encourage conventional military threats to Europe to re-emerge, perhaps from a resurgent Russia or the Middle East in the future. Not attempting to mitigate shocks through prudent preparation or by sending the wrong strategic messages, it is argued may even induce a shock, for example the invasion of the Falkland Islands by the Argentineans in 1982. See UK Joint Doctrine and Concepts Centre, 'Strategic Trends', Shrivenham, UK Defence Academy, March 2003 for a full discussion.
32 Minimum Necessary Force is defined as 'Force, up to and including deadly force, limited to the degree, intensity and duration necessary to achieve the objective' (see Joint Warfare Publication 3-46, 'Legal Support to Joint operations', Shrivenham, JDCC, October 2004).
33 See for example, Lambeth, BS., 'Air Power against Terror: America's Conduct of Operation Enduring Freedom', RAND, 2005, pgs 311-325 'The Impact of Rule-of-Engagement Constraints'.
34 Bhagwati, J., 'In Defense of Globalization', Oxford University Press, 2004.
35 Gowing, N., 'Real Time Television Coverage of Armed Conflicts and Diplomatic Crises: Does It Pressure or Distort Foreign Policy Decisions?' John F Kennedy School, Harvard University, 1994.
36 Sabin, P., 'Using History to Understand Contemporary Conflicts', History Teaching Review Year Book, Edited by Andrew Hunt, Vol. 20. 2006.
37 Emery, Norman, Maj., et al, 'Fighting Terrorism and Insurgency: Shaping the Information Environment', Military Review, January-February 2005.
38 Freedman, L., 'The Transformation of Strategic Affairs', International Institute of Strategic Studies, London (Adelphi Paper 379), 2006.
39 Emery, Norman, Maj., et al, 'Fighting Terrorism and Insurgency: Shaping the Information Environment', Military Review, January-February 2005. .
40 Kitson, F., 'Low Intensity Operations: Subversion, Insurgency, and Peacekeeping', London: Faber and Faber Ltd., 1971.
41 Campaign Authority is defined as an amalgam of 4 interdependent factors: the perceived legitimacy of the international mandate; the perceived legitimacy of the authority of those conducting operations; the degree to which factions, local populations and other actors subjugate themselves to the authority of those conducting operations and the degree to which the activities of those conducting operations meet the expectations of factions, local populations and others.
42 Title adapted from the insightful paper of a similar name by Ramakrishna, K., 'It's the Story, Stupid: Developing a Counter-Strategy for Neutralizing Radical Islamism in Southeast Asia', CSRS Discussion Paper 05/48, September 2005
43 UK Joint Doctrine and Concepts Centre, 'Joint Discussion Note 4/05: The Comprehensive Approach', Shrivenham, UK Defence Academy, January 2006.
44 An 'Influence Strategy' is presented here as a pan-government approach to influencing the perceptions of target audiences and thereby, endeavouring to persuade, convince, deter, disrupt, compel or coerce target audiences to adopt a desired Course of Action (CoA). Moreover, the influence desired is sought through the combination of a co-ordinated and synchronised plan for physical and information-based activities, both driven by wider influence objectives rather than purely operational ones per se. As such the definition is a broad and overarching one that would include those for the 'Information Campaign' and 'Influence Activities' already seen in extant UK military doctrine, and implies the primacy of information operations over those of . An 'Information Campaign' is defined as the coordinated information output of all Government activity undertaken to influence decision-makers in support of policy objectives, while protecting one's own decision-makers. An 'Influence Activity' is defined as any activity whose primary purpose is to influence will, and is achieved by the promotion of identified

themes to target audiences through broadcast messages (Development, Concepts and Doctrine Centre, 'United Kingdom Glossary of Joint and Multinational Terms and Definitions', Edition 7, Shrivenham, June 2006).

45 Interview with Air Chief Marshal Sir Brian Burridge KCB CBE ADC RAF (ret'd) 26 April 2006.

46 Ibid.

47 Coleman, J., 'Foundations of Social Theory', Cambridge: Harvard University Press, 1994

48 Van der Kloet, Irene, 'Building Trust in the Mission Area', Small Wars & Insurgencies, Vol 17, No 4, 421-436, December 2006 based on his related dissertation entitled 'A Soldierly Perspective on Trust; A Study into Trust within the Royal Netherlands Army', Tilburg University, Enschede: Febo Press, 2005. To paraphrase: competence - the trusted party should have the ability to perform the task to which trust relates; predictability - the trusted party should be able to complete the given task for a given deadline and do so consistently; benevolence - the willingness to do something for someone else, which implies that one will dedicate oneself to the task, and thus put more effort into its achievement; and honesty - where deviations from the expected outcomes exist, any given explanation must be an honest reflection upon the events especially collateral mistakes.

49 See for example, Emery, N. Maj., et al, 'Fighting Terrorism and Insurgency: Shaping the Information Environment', Military Review, January-February 2005.

50 Information Operations are defined as coordinated actions undertaken to influence an adversary or potential adversary in support of political and military objectives by undermining his will, cohesion and decision making ability, through affecting his information, information based processes and systems while protecting one's own decision makers and decision-making processes. Development, Concepts and Doctrine Centre, 'United Kingdom Glossary of Joint and Multinational Terms and Definitions', Edition 7, Shrivenham, June 2006

51 Media Operations are defined as that line of activity developed to ensure timely, accurate, and effective provision of Public Information and implementation of Public Relations policy within the operational environment, whilst maintaining operational security. Ibid.

52 Cordingley, P., Maj Gen, 'In The Eye Of The Storm', Hodder & Stoughton, 1996.

53 A matter that will be returned to later in the paper in the light of the overwhelming proportion of tasks completed by even Combat AP that are non-destructive in nature and outcome

54 Cordesman, Anthony H., 'Preliminary 'Lessons' of the Israeli-Hezbollah War' ,Working Draft for Outside Comment, Revised: August 17, 2006, CSIS (http://www.csis.org/burke/)

55 Hammes, TX., Col (ret'd) USMC, 'A Sling and a Stone', Zenith Press, 2004

56 Whether such an approach represents a new form of warfare or just an evolution of traditional irregular tactics taking advantage of new information technologies is outside the scope of this paper.

57 Sabin, P., 'Using History to Understand Contemporary Conflicts', History Teaching Review Year Book, Edited by Andrew Hunt, Vol. 20. 2006.

58 Cordesman, Anthony H., 'Preliminary 'Lessons' of the Israeli-Hezbollah War' ,Working Draft for Outside Comment, Revised: August 17, 2006, CSIS (http://www.csis.org/burke/)

59 Hezbollah's status as a terrorist organisation ensures a rough ride from the UN but locally they have already made political gains. See for example Cambanis, T., 'Hezbollah gains as Lebanon's leaders struggle; as nation readies for truce, militia's influence grows', Boston Globe, 13 August 2006. The Israeli Defence Chief was forced to step down in the face of increasing pressure from public opinion that was fuelled by the media coverage of the conflict and subsequent analysis. See for example, Guardian Unlimited 'Minister's warning as Israeli military chief quits', 17 January 2007.

60 Emery, N Maj., et al, 'Fighting Terrorism and Insurgency: Shaping the Information Environment', Military Review, January-February 2005.

61 Interview with Air Marshal Sir Clive Loader KCB OBE FRAeS RAF, Deputy Commander-in-Chief Strike Command, dated 5 February 2006.

62 Intelligence and Security Committee, 'Report into London Terrorist Attacks on 7 July 2005', HMSO,

May 2006.
63 Ramakrishna, Kumar, 'It's the Story, Stupid: Developing a Counter-Strategy for Neutralizing Radical Islamism in Southeast Asia', CSRS Discussion Paper 05/48, September 2005
64 Ibid.
65 A 'Battlespace' in military doctrine is defined as 'All aspects of air, surface, sub-surface, land, space and the electromagnetic spectrum that encompasses the area of operations' (Development, Concepts and Doctrine Centre, 'United Kingdom Glossary of Joint and Multinational Terms and Definitions', Edition 7, Shrivenham, June 2006). The suggestion here is that such a definition overlooks the informational dimension of the operational environment. All activities in the air, surface, sub-surface domains or EM spectrum can have an impact on vital perceptions. Thus, any military actions (or inactions) become part of our virtual language in support of, or undermining, the intended narrative. If we purport to be a 'Force for Good' we must be clear in our actions and words for whose good, and judge the likely answers from all perspectives. As discussed in the previous section, success in the narrative Battlespace may actually be more important than the physical realms more traditionally considered.
66 A balanced force is one that is said to have '…all the necessary capabilities to carry out a particular mission without unnecessary redundancy'. In the context presented here, force balance concerns the make-up of all military forces when set against contemporary irregular missions.
67 Former Secretary of Defense Donald H. Rumsfeld, taken from transcript of 'Secretary Rumsfeld Town Hall Meeting in Kuwait' dated 08 December 2004, available at www.defenselink.com/transcripts.
68 See for example Lacy, MW, 'Al Qaeda's Global Insurgency: Airpowers in the Battle for Legitimacy', Air & Space Chronicles, Jul 2003 for a pertinent review of this relationship between tactical, lethal precision and legitimacy for AP's use against terrorist targets.
69 Indeed the extant UK military definition of precision is 'The ability to destroy or neutralise targets with a high degree of lethality, discrimination and accuracy.' (emphasis added) Development, Concepts and Doctrine Centre, 'United Kingdom Glossary of Joint and Multinational Terms and Definitions', Edition 7, Shrivenham, June 2006.
70 Collateral damage is defined as the damage to personnel and property adjacent to, but not forming part of, the authorised target. Ibid.
71 Empirical evidence to support this will be discussed in a later section of the paper. However, it is probably sufficient to say at this juncture that the deterrent utility of military presence through patrolling, be that on the ground or in the air, is a truism in military operations that probably does not need much further explanation.
72 Time-sensitive targets are defined as 'those targets requiring immediate response because they represent a serious and imminent threat to friendly forces or are high payoff, fleeting targets of opportunity'. Ibid.
73 Interview with Dr P Sookdheo of Barnabus Fund dated September 2005 and see Hammes, TX., 'Time Sensitive Targeting: Irrelevant to Today's Fights', RUSI Defence Systems, August 2006, for a brief but interesting review of this issue.
74 Such judgement would rest on many aspects of the situation faced by the decision maker. Key areas, not discussed in this paper, include cultural and religious sensitivity, knowledge of local customs, and the historical context leading to the present-day situation. The endeavour to understand our opponents is explicit in all aspects of military doctrine and demonstrated in practice. However, the implicit need to examine the more human factors of not just the adversary but also the wider audiences is perhaps less well understood or actioned. See for example, Alwyn-Foster, [insert initials], Brig Gen, British Army, 'OIF Phase 4: The Watershed the US Army Still Needs to Recognise', [insert journal], 2005.
75 Hammes, TX., 'Time Sensitive Targeting: Irrelevant to Today's Fights', RUSI Defence Systems, August 2006.
76 Interview with Air Chief Marshal Sir Glenn L. Torpy, KCB, CBE, DSO, BSc (Eng), FRAeS, RAF, Chief of the Air Staff dated 5 June 2006.
77 Ibid.

78 Tempo is defined as 'The rate or rhythm of activity relative to the enemy, within tactical engagements and battles and between major operations. It incorporates the capacity of the force to transition from one operation of war to another.' (emphasis added) Development, Concepts and Doctrine Centre, 'United Kingdom Glossary of Joint and Multinational Terms and Definitions', Edition 7, Shrivenham, June 2006.

79 Interview with Air Marshal Sir Clive Loader KCB OBE FRAeS RAF, Deputy Commander-in-Chief Strike Command, dated 5 February 2006.

80 Sabin, P., 'Using History to Understand Contemporary Conflicts', History Teaching Review Year Book, Edited by Andrew Hunt, Vol. 20. 2006.

81 The phrase is adapted from Mao Zedong's advice to his guerrillas to 'move through the people like a fish moves through water'. The Briggs Plan, implemented fully in 1950 during the Malayan Emergency involved the relocation of the population ('water') to expose the irregulars ('fish') by depriving them of the support, cover, and resources of the local population and removing their freedom of movement.

82 Ideally with the full weight of a legitimate judicial process applied, which might require the phrase 'kill or capture' adversaries, as is oft heard in military operations, to be reversed in its initial focus.

83 AKA 'Combat Air Power Joint Effects Database' created by the author with the support of staff from the UK Joint Force Air Component Head Quarters, RAF High Wycombe and data from several real-world Theatres of operations.

84 As stated the data has relied on testimony from those that might best judge the operational impact of Combat AP: the soldiers, airmen and commanders that requested and controlled the aircraft involved. The author passes his thanks to all of those that must necessarily remain nameless, for their often very detailed reports written at the end of what must have been some very long days.

85 Air Command and Control, defined as those operations which ensure the efficient planning and execution of AP; Counter-Air Operations, which provide the required degree of control of the air; Air Operations for Strategic Effect (AOSE), aimed directly at reducing or eliminating an enemy's ability and/or will to continue fighting; Integrated Air Operations (IAO), integrating AP with other Joint Force capabilities actions; Rapid Global Mobility, to move and support men, materiel and assets at speed over strategic distances; and Intelligence, Surveillance, Targeting and Reconnaissance (ISTAR), encompassing AP's contribution to the acquisition, processing and dissemination of information and intelligence. Directorate of Air Staff, UK MoD, 'Future Air and Space Operational Concept', available at http://www.raf.mod.uk/downloads/documents.

86 At Table 1, Non-Lethal 'EW' denotes the use of non-destructive electronic warfare techniques such as communications jamming; Non-Lethal Information Relay concerns the use of on-board sensors and associated communications equipment to relay detected images or other data to an appropriate decision-maker (either on-scene commander or at higher formation headquarters). The Non-Kinetic types of task including Armed Reconnaissance and Escort, Air Presence and Shows of Force (SHoF) will be defined shortly in the discussion that follows.

87 Whether some Combat AP activity could be described as focused directly on coercing the irregular opponent's ability or will to fight is a mute point and may suggest a need to re-categorise some of the analysis as AOSE. However, as almost all sorties analysed were requested by and therefore, integrated with Land operations, and in the interests of simplicity, all mission data was categorised under the IAO AP role.

88 Kinetic activity is defined here as the employment of a Combat Air platform's destructive potential; Non-kinetic employment are those tasks associated with a Combat aircraft that has the potential to destroy but does not do so; and Non-lethal employment is associated with a Combat Air platform that may have a destructive potential but in addition can use on-board sensors or other equipment to support combat operations, for example with jamming communications systems.

89 Katz, Joseph, A, 'The Role of Shows of Force in the First Democratic Elections', Combined and Joint Task Force-76 (CJTF-76) Fire Support Officer in Bagram, Afghanistan, serving in Operation

Enduring Freedom, Field Artillery, Jan-Feb 2005

90 A Show of Force (SHoF) lacks a formally agreed definition. However, as Figure 1 suggests, a SHoF involves the threatening use of a Combat AP, using the height, speed and the additional use of flares as required altering the required coercive impact. Although it is feasible to complete a SHoF with a non-Combat platform the lack of credible threat may undermine its effectiveness. The key difference between a SHoF and Air Presence is the generally less aggressive posture of the latter, though they should be regarded as part of the same Non-Kinetic continuum.

91 Air reconnaissance is defined as a mission undertaken to obtain by visual observation or other detection methods, information about the activities and resources of an enemy or potential enemy, or to secure data concerning the meteorological, hydrographical or geographical characteristics of a particular area. Information can be collected from photographic, radar, and optical sensors mounted in a variety of manned and unmanned air and space vehicles. Development, Concepts and Doctrine Centre, 'United Kingdom Glossary of Joint and Multinational Terms and Definitions', Edition 7, Shrivenham, June 2006.

92 Armed Reconnaissance missions are flown with the primary purpose of locating, reporting and potentially responding to targets of interest in assigned general areas, lines of communication or infrastructure routes, and not for the purpose of attacking specific pre-briefed targets. Tactical Air Reconnaissance missions employ visual, and specialist photographic or electronic means to locate, identify and track the activities and resources of opposing forces for possible attack by other assets. Ibid.

93 As with SHoF described earlier, to date there is no formally agreed definition of NT ISR. In essence it is the use of a Combat Air platform and its associated sensors to complete an ISR task. The novel aspect of this type of application is the lack of specialisation. The sensors predominately used are those more designed to support direct targeting procedures but, with on-board data link or voice relay, any detected information can be passed to ground commander either on scene or within a head quarters very quickly.

94 This subsection was compiled with the assistance of Wing Commander Andrew Coope, MA RAF, currently working at the RAF Air Warfare Centre and formerly a Deputy Chief of Strategy in the Combined Air Operations Centre in Qatar during recent operations.

95 Lambeth, BS., 'Air Power against Terror: America's Conduct of Operation Enduring Freedom', RAND, 2005.

96 Danskine, William B, Lt Col, USAF, 'Aggressive ISR in the War on Terrorism - Breaking the Cold War Paradigm', Air & Space Power Journal, Summer 2005

97 Interview with Air Vice-Marshal C Moran OBE MVO MA BSc RAF, Assistant Chief of the Air Staff on 29 January 2006 and.

98 Quoted from paper delivered by Air Chief Marshal Sir Brian Burridge KCB CBE ADC RAF (ret'd) on 11 January 2007 during the RAeS Air Power Group Lecture at the UK Defence Academy, Shrivenham, entitled 'Future Air Capabilities – Fully Comprehensive or Third Party Fire and Theft?'.

99 Quoted in Directorate of Air Staff, UK MoD, 'Future Air and Space Operational Concept', available at http://www.raf.mod.uk/downloads/documents.

100 Sabin, P., 'Using History to Understand Contemporary Conflicts', History Teaching Review Year Book, Edited by Andrew Hunt, Vol. 20. 2006.

101 Of course, the production of a RAP for Air Control and Policing tasks also brings into question the ability to integrate military and civilian air operations, whilst seeking to detect potentially aggressive actions. Where indigenous infrastructure lacks this capability, the employment of a deployable Air Command and Control role comes into focus.

102 Quoted by Peter Almond in his article 'Air Power and the Media: A personal view from the media world', at Ch3 of 'British Air Power', edited by Peter W Gray, HMSO, London, 2003.

103 For some such an approach may seem over severe, too simplistic and imprecise, relying too greatly on the perceptions of those involved and lacking sufficient corroborating evidence from third parties or sources. There is little doubt that a

debate will need to be had concerning the type of data and analysis that might be required to more accurately assess the effectiveness of Combat AP's non-destructive use; this short paper is not the place for that to happen. Nonetheless, the adherence to only discernible, positive outcomes as perceived and recorded by the entities requesting and controlling the activity was deemed a sufficient indication of the tactical outcome for the purposes here. Moreover, reporting the results to 1 significant figure is in tacit recognition of the undeniably subjective, perhaps imprecise nature of the source data. The results presented should only be viewed therefore, as an indication of the 'order of magnitude' of occasions when Combat AP activity produced a given outcome. Future studies may now be required to further analyse results such as these.

104 Detection: the discovery by any means of the presence of a person, object or phenomenon of potential military significance; Deterrence: the convincing of a potential aggressor that the consequences of coercion or armed conflict would outweigh the potential gains; Disruption: the use of force [here taken to include all types of Combat AP employment] to shatter the cohesion of [an adversary] and prevent it from functioning effectively in combat; and Destruction: to kill or so damage an enemy force that it is rendered useless. Development, Concepts and Doctrine Centre, 'United Kingdom Glossary of Joint and Multinational Terms and Definitions', Edition 7, Shrivenham, June 2006.

105 Katz, Joseph, A, 'The Role of Shows of Force in the First Democratic Elections', Combined and Joint Task Force-76 (CJTF-76) Fire Support Officer in Bagram, Afghanistan, serving in Operation Enduring Freedom, Field Artillery, Jan-Feb 2005

106 Ibid.

107 See for example, Burkett, WH., 'Assessing the Results of Effects-Based Operations (EBO): The Relationship between Effects-Based Operations and the Psychological Dimension of Warfare', USAWC Strategy Research Project, Carlisle, PA, 2003.

108 Kemp, N, and Strong, G., 'Sentiment Analysis for Media Monitoring', Dstl/TR1420 v1.0, February 2005.

109 Roberts, L. et al, 'Mortality Before and After the 2003 Invasion of Iraq: Cluster Sample Survey', The Lancet, October 2004.

110 Jamail, D., 'Living Under the Bombs', Scotland: Sunday Herald, December 2004, available through www.tomdispatch.com.

111 Ibid.

112 CENTAF Daily Air Power Summaries, dated 6 December 2004, available at www.centaf.af.mil.

113 Taken from a transcript of a lecture given by Maj Gen G C M Lamb CMG DSO OBE, British Army, entitled 'In Command and Out of Control', during the NEC C2 Workshop, 2006.

114 Israeli Army Chief of Staff, Lt Gen Dan Halutz, reported in Associated Press, 12 July 2006

115 Lawrence, TE., 'Seven Pillars of Wisdom: A Triumph' London: Penguin Books, 1971, p132.

Notes

Notes

The commanding officer of No 17 Sqn, Wg Cdr J E Houghton, briefs an officer of the Luftwaffe unit with which the squadron was then 'twinned' – the second Staffel of JBG 34 – Prior to a joint sortie from RAF Brüggen in April 1981 (AHB RAF)

The Fall and Rise of the Luftwaffe:

The role of the Royal Air Force in the reformation of the Luftwaffe in 1955 — implications for the Cold War and beyond

By Air Marshal Stu Peach

Introduction

There are many books, articles and stories about the role of air power, air warfare and air forces during the Cold War. But, gaps remain. One is the role played by the Royal Air Force in the re-birth of the Luftwaffe in 1955. The Cold War seems a long time ago to many serving airmen. Many more would probably say that the Cold War has little to tell us about contemporary air operations in the Persian Gulf and Afghanistan. Maybe, maybe not; NATO air forces continue to operate – either within a form of NATO air command and control or independently in coalitions of the willing – in 'ways' which are shaped by history. Not just the history of nations and the strategic choices of those responsible for their armed forces, but in so many other ways – training, standards, culture, doctrine, tactics: all conflate to describe the way they operate now. Thus this little known story in air power history originating in the ruins of Germany in 1945 had important consequences throughout the Cold War and beyond. That is the theme of this paper.

In addition, in this paper I will challenge the orthodoxy of the view that the contemporary – and unparalleled – intimacy between the Royal Air Force and the United States Air Force is the dominant theme of the current 'way' in air war; born as a direct result of common tactics and common belief following World War Two.[1] This is only partly true. In fact, following the creation of an independent United States Air Force in 1947, there were tactical and operational points of difference on the employment of air power which were to play out as the Cold War developed. Furthermore, the deployment of large air force elements of 'occupation' into the German zones of the wartime victors was not itself self-evident in the summer of 1945. As those airmen both sides of the Atlantic who were 'staying on' took stock of what had happened to air power and warfare waged from the air between 1936 and 1945, their heads were full of new designs for large bombers – those 'in the know' - including the idea that the development of nuclear weapons made air warfare the war winning weapon. But even as early as July and August 1945, it became clear to the delegations at the Potsdam Conference that there would be no easy peace between the former WWII allies.

Despite the grand strategy being played by Stalin with his new partners Truman and Attlee at Potsdam, the high command of the United States Army Air Force were very focused on finishing the war with Japan with the first use of nuclear weapons[2], 'bringing the boys home' and, in the aftermath of the strategic shock of Hiroshima and Nagasaki, Arnold, Eaker and Spaatz were confident of the culmination of the long-awaited formal independence of the air arm of the US Army into the United States Air Force. The reduction of US air power based in Germany, the IX Air Force under Maj Gen Pete Quesada, was very rapid indeed. Brand new tactical aircraft bound for the European theatre of operations were tipped into the sea. There was no plan for an occupation air force.[3]

In the British sector, the situation was different. Royal Air Force elements of the British-led Second Tactical Air Force(2TAF) played an extremely sensitive role in the dismantling of the Luftwaffe in 1945-46 – a mission carried out with great sensitivity and distinction

under the inspired leadership of Air Marshal Sir Philip Wigglesworth.[4] The label RAF in front of 2TAF was also misleading. When hostilities ceased, 2TAF consisted of 5 French, 3 Czech, 6 Polish, 2 Dutch, 2 Belgian, 2 Norwegian, 2 Australian, 3 New Zealand and 19 Canadian Squadrons. We talk today about coalition tension. At the end of hostilities in 1945, the aircrews and groundcrews of 2TAF just wanted to go home. But, 2TAF was the tactical air force in being in the British Sector. Therefore they simply had to get on with the job of dismembering the Luftwaffe and coping with unfriendly Soviet Air Force 'neighbours'. This was not a good time for morale. When Air Chief Marshal Tedder (Eisenhower's wartime deputy and post war British Chief of Air Staff) visited Germany following (false) rumours in London of mutinous behaviour, he viewed the effects of the Strategic Bomber Offensive, realised there was still a mission to be achieved and set the conditions for a British Air Force of Occupation that was more attuned to the needs of the situation in Germany.

In the years that followed, the Royal Air Force in Germany gradually rebuilt several former Luftwaffe airfields, which were to form the backbone of the front line in the Cold War. Despite the conflicting demands of demobilisation, dismemberment and maintaining airspace integrity through air policing, BAFO performed well. Strong leadership and a sense of purpose kept stability in the critical years 1945-1950. This stability achieved two significant effects for the future. The first was to provide the nucleus for a tactical air force following the formation of the North Atlantic Treaty Organisation in 1949. The second was to act as a friendly 'bridge' to the Luftwaffe when German rearmament became a reality in the early 1950s. The Royal Air Force therefore played a formative political and military role in the reformation of the Luftwaffe in 1955.[5] After 1955, the partnership between the Royal Air Force and the Luftwaffe in the British-commanded Second Allied Tactical Air Force (TWOATAF) was a major factor in the tactical development of both forces.[6] In order to justify that statement it is necessary to compare and contrast the structural development of the RAF and the German Air Force until 1945 to explain how different the two forces were.

One of the conditions of unconditional surrender in 1945 by Germany was the destruction of the remnants of the Luftwaffe. The commonly held view is that the British and German 'way' in the waging of air warfare born in the Second World War was fundamentally different. There are many historians who comment on the differences between the Luftwaffe and the Royal Air Force 'way' in air war during the Second World War.[7] This school of 'difference' tends to focus on the supposition that the Luftwaffe was a largely tactical force focused almost exclusively on the needs of the Army.[8] This school has it that strategic bombing, maritime operations and other independent air power roles and missions were neglected in air power thinking and doctrine in Germany compared to the teaching and thinking in Britain and the USA.[9]

There is another view. In the late 1930s, the Luftwaffe was trying hard to develop a fleet of four-engined bombers, colloquially known in the German Air Force as 'Die Ural Bomber'. Recent research into the Luftwaffe has suggested as early as 1938 Hitler wanted

to develop a bomber to attack New York.[10] German designers ran into three problems: operational capacity, technical capability and doctrine. The operational problem was that the Luftwaffe was engaged in continuous operations from 1936, the year of its birth as a modern air force. As operations and preparations continued relentlessly, there was little time to take stock, learn lessons and modify equipment. The latter point in particular meant that German designs of 1933 to 1936 tended to remain in production for many years. For instance many of the types that served in the Condor Legion in Spain remained in service in 1945. Of course weapons were developed, tactics changed to meet the changing threat, but the German 'way' of air warfare that was developed on a small scale in Spain to become the supporting element of Blitzkrieg, became the way of air war for Germany until the end; there was no respite to take stock and develop new concepts.[11]

Procurement process and practice were also very different. The aircraft industry in Germany was very different to that in the UK. There were far fewer large concerns mass-producing similar designs; they were integrated operations – the concept of a prime systems integrator would have been very familiar to the 'Brahmins' of the German aircraft industry. In the UK, the aircraft industry had grown up in 'cottage industry' fashion with small, short term contracts let by the Air Ministry, which led to a bewildering variety in aircraft types, coupled with a legacy of mixed fleets often in the same squadron, making for a logistical nightmare. The Germans had no legacy procurements, they were starting from scratch. They did, however, have an Achilles heel: aircraft engines. There were very few aircraft engine manufacturers. The steady orthogonal development of engine, propellor and gearbox technology in the UK leading to robust, flexible designs such as Merlin was more difficult in Germany. For example, during flight trials of the competing designs of the German four-engined bombers, one version in particular (Heinkel He 177) saw the engines constantly overheating or even catching fire. That said, German engineers caught up quickly, developing fuel injection and advanced propellor technology – and arguably overtaking the UK in some areas of engine design before the start of the war.

A third problem that beset the Germans was the competing egos of the high command. Tactical doctrine verged on dogma. In the late 1930s, the German General in charge of aircraft development was General Ernst Udet. Like Goering, a World War one fighter ace, Udet was obsessed with dive-bombing. He was totally convinced that all offensive aircraft had to deliver their weapons through steep dive attack in order to improve the accuracy of weapon delivery. The Luftwaffe's first four-engined bomber was given over two hundred modifications to make it a successful dive-bomber. This did not work; the lumbering Messerschmitt might have been made to work as a four-engined bomber delivering bombs from medium altitudes in level flight, but was never going to be a successful dive bomber.[12]

The combination of these factors rather than a misunderstanding of the principles of air power lay behind the continuance with designs set in the early 1930s and the focus on a medium scale force geared to support the Army.

This was the war the Luftwaffe were forced to fight, rather than the war they wanted. In short, at the strategic level, in the late 1930s the Luftwaffe was simply not ready for prolonged and sustained operations across multiple theatres of operations; it was focused on the tactical requirements of the German Army. This focus was to shock, paralyse and defeat the land and air components of Western Europe in 1939-41. The integration of air and land power to generate what we would now term joint manoeuvre by the Luftwaffe, was impressive. This did not happen by accident, nor overnight.

A Gotha Go145 military training aircraft in civilian markings during the mid-1930s

The Luftwaffe had been proscribed as an organisation under the Treaty of Versailles. This did not stop former Reichswehr Air Service officers from flying light aircraft, gliders and – crucially - conducting operational evaluations working alongside the Soviet Air Force under conditions of great secrecy at Lippetsk in the Soviet Union. These force on force experiments led to the development of the air/land elements of Blitzkrieg in what we would now term air manoeuvre. By 1929, when in theory the Luftwaffe did not exist, advanced close air support, air interdiction, airborne force operations, gliders – all were tested and evaluated in the vast spaces of the Soviet hinterland between the most unlikely of allies: Weimar Germany and the Soviet Union.[13] All this was unknown to British intelligence. In Britain, the Armoured Force experiments on Salisbury Plain conducted by the British Army in the late 1920s continued in isolation from the Royal Air Force. Main effort in the Royal Air Force was survival as a separate Service and the development of distinct roles for air power, particularly bombing. On deployed operations, air power (largely World War One vintage equipment) was employed in the air-policing role around the Empire. Research and Development effort focused on speed for fighters, the development of flying boats for maritime support operations (primarily for colonial duties) and bombing with large, slow bombers.[14] Thus, at the time when Germany and the Soviet Union were developing advanced, fully integrated air/land operations with a focus on weapon delivery accuracy and weapon development, air/land operations were being largely ignored in Britain, except for a few zealous officers who were determined to pursue army cooperation despite possible risk to their careers.[15]

At the tactical level, the performance of the Luftwaffe exceeded the expectations set for it – particularly in the campaign against France in May 1940. This was to set the conditions for German over-confidence. When war followed against Great Britain itself, the Royal Air Force was mightily under-estimated by German intelligence. Good and brave commanders, resilient, adaptable people drawn from a wide cross-section of British and Commonwealth societies, the fruits of its fragmented aircraft industry and the latent organisational strength laid by Trenchard and Dowding in

the structures, education and training within the Service. Above all, it was the advanced network-enabled system for the air defence of Great Britain and the moral courage of Dowding as a commander to conserve his force that set the conditions for victory.[16] Again the cinematic and media view is of 'The Few' flying machines often developed privately by passionate designers and enlightened manufacturers who saved the day in the face of official lethargy. Although the quality of the machine and the bravery of the 'few' gave critical advantage as the Battle of Britain reached culminating point, it was the resilience within the 'system' that prevailed.[17] Indeed, anyone beginning the quest for decisive advantage in modern warfare through networked enabled capability would do well to study all the elements of the air defence network of the UK. For the UK in 1940, this network represented a culmination of almost two decades of hard work across all the lines of development.

As the war progressed, the systemic and structural cracks in the Luftwaffe widened. Blitzkrieg did not gain the necessary momentum on the Eastern Front. Range and re-supply became decisive factors. Despite the superiority of German machine guns, cannons, bombs, fuzes and aircraft cameras, the competence of the basic designs, the overcoming of many of the problems with aircraft engines and the existence of much innovation within the German aircraft industry, there was a failure to adapt to total industrial war. [18] Instead Hitler and Goering, increasingly relied on exhortation and excessive demands from an increasingly exhausted force doing their tactical best against difficult odds.[19] Many Luftwaffe-inspired designs and advanced production engineering were wasted. In addition, from 1943 on, the Allied bombing offensive placed the German aircraft industry under intolerable strain[20]. By 1945, the Luftwaffe was a spent force. With the odd exception such as the Messerschmitt 262, tactically destroyed by trying to turn a revolutionary fighter into a bomber, the Luftwaffe was finished.

That said, as a Service committed to innovation in aeronautics, aircraft and weapon development, the Luftwaffe had developed air and, what was to become aerospace power, in unconventional ways: the first helicopter, swept wing jet fighter, precision guided munitions, cruise missile and exo-atmospheric rocket, were all advanced German designs. In 1945, however, as in 1919, Germany was denied an air force. In the years 1945 to 1948 there was another priority in Germany: survival. In the short term, British, American, Russian and French specialists dismantled and carted off the German aircraft industry. All involved in this scavenging effort were shocked at how far ahead Germany was in thinking and conceptual development in aeronautics; although few were prepared to say so at the time. Many of the mainstays of the Cold War in air and space – and on both sides – were developed from captured German ideas or even developed by German scientists. The well-known example is Doktor Werner von Braun, but there were many others. In Germany itself following the cessation of hostilities, the problem of how to dispose of the rump of the Luftwaffe loomed large in 1945 and 1946.[21]

The occupation mission, however soon gave way to something much more serious for the British Air Force of Occupation (BAFO). Run down

from eighty to ten squadrons in six months, BAFO struggled to cope with the air policing role as the Soviet Air Force element in the Soviet Zone of Occupation increasingly challenged the British in the air. The Cold War became warm with steadily increasing numbers of air-to-air incidents along the boundaries between the allied and Soviet sectors. Friction increased during the hard winter of 1947/48 as the Soviet Air Force increasingly challenged Allied air access to Berlin.[22] The Berlin Airlift followed, the strategic and decisive use of air power to demonstrate Allied resolve. The crisis had a strategic effect on the European situation. The slow manoeuvring towards some form of European defence arrangement accelerated. The British Government was feeling the effect of strategic overstretch. British attitudes to the deteriorating situation in Germany could be summarised by: "a firm and immediate promise of a token force".[23]

Nonetheless, despite British retrenchment to the strategic status quo ante, the need for 'something to be done' about the Soviet Union's belligerence brought to the fore by the Berlin crisis, helped to set the conditions for the formation of the North Atlantic Treaty Organisation in April 1949 in Washington. The wishful thinkers that wanted several years to determine how NATO might develop as a military organisation were in for a further shock caused by events. The Korean War unexpectedly broke out in 1950. The Royal Air Force did not deploy en masse to Korea[24], there were simply too many crises around the British Empire: Malaya, Cyprus, Egypt: the thorny issue of self-determination in the troublesome British Empire kept the force in being busy; much of the equipment and manpower for these 'out of area' peace enforcement commitments were drawn from Germany. For the remaining Royal Air Force personnel in Germany in 1950-51, life was difficult and busy. Air policing along the border with the Soviet Zone and protecting access to Berlin was a dangerous business. Several British aircraft were lost, probably shot down.[25] Re-equipment to match the growing strength of the Soviet Forces was at last underway, but proceeded slowly. The refurbishment of former Luftwaffe airfields began in earnest in 1950. Between 1950 and 1955 eight former Luftwaffe airfields were rebuilt and made ready for the jet age by the British. These bases were to form the backbone of the basing structure of the newly-formed Luftwaffe. [26]

As a result of the spurt caused by the Korean War, the military component of NATO began to develop coherent force structures that might have to actually go to war. The question of the rearmament of Germany could not be ignored. At the Lisbon Conference of 1952, a force goal of NATO air force strength of ten thousand tactical aircraft was set. Of course those at the tactical level were busy coping with the situation they were in: making do with rapidly ageing World War Two-vintage equipment ranged against an increasingly belligerent and well-armed Soviet foe.[27] Economic realities and the weak nature of European aerospace industry would slow the process of rearmament down; many promises of early delivery of new equipment were broken. Despite the strategic generosity of Marshall aid (provided the purchase was from the US) many early NATO jet fighters and fighter bombers were very late in delivery. Airmen serving in Germany in the early 1950s were

frustrated. Clearly fighter squadrons could not pit piston-engined Tempests (good as they were) against MiGs – the RAF bought Canadian-manufactured Sabres as a stop-gap. The popular mood was captured by the quest to break the sound barrier and develop new aircraft and weapons; the reality of procurement funding, production and delivery was painfully slow. At least, though, we could re-organise.

In 1949, BAFO had been re-badged as Second Tactical Air Force, its wartime name, as a three star Royal Air Force command. In 1952, the role became international with the creation of the Second Allied Tactical Air Force (TWOATAF), headquartered in the new Joint Headquarters at Rheindahlen in Germany. This formation included assigned tactical air force elements from Belgium, France, Netherlands and the UK. Air was fully collocated and integrated with land – the lesson of WWII had been heeded. Those serving in the purpose-built joint headquarters knew that it was only a question of time before some form of German air force element would join them.[28] At the strategic level, the UK supported the policy to: 'bind Germany irrevocably into the mainstream of European institutions'.[29] This British foreign policy objective translated into a willingness within the force elements of Royal Air Force Germany into an enthusiasm to set the conditions for the integration of German Armed Forces into NATO. From 1953 to 1954, as the political machinations played out at the strategic level, the UK military played a leading role in setting the conditions for the reformation of the German Army and Luftwaffe.[30]

Of course this was more than altruism. UK forces were globally stretched, as the retreat from Empire required the deployment of force elements in all continents. As suggested above, new equipment arrived much more slowly than promised and the cost of Cold War rearmament came at a time when the British economy was not recovering as planned.[31] At the operational level, British commanders and staff officers alike in Royal Air Force Germany (not to mention those serving within NATO) worked tirelessly throughout 1954 and early 1955 to set the conditions for the reformation of the Luftwaffe. The ambitious plan for the re-born force called for a force strength of 40000 people, 1000 aircraft and 1300 pilots from scratch in less than two years. This required rapid and sustained action. Bases refurbished by the Royal Air Force were handed over to the new force. In addition, pilot, engineer and support training was conducted by the Royal Air Force (and the Royal Navy) in the UK and Germany, cementing links and forming enduring friendships.[32] The tone was set by the Commander-in-Chief of the Second Tactical Air Force at the time, Air Marshal (later Air Chief Marshal Sir) Robert Forster. He made it very clear to all his staff in the Second Allied Tactical Air Force that German officers were to be integrated into the staff quickly and at all levels. Ultimately a German officer was to become Chief of Staff of TWOATAF in the rank of Major General.[33]

The Luftwaffe was reformed in September 1955. [34] The strategic context of the time was very different to that of 1945. The United States Air Force (USAF) was the dominant strategic, operational and tactical air power force. At that time, NATO's nuclear response

was entirely in the hands of air forces. Given NATO reliance on air-delivered nuclear weapons within the 'Tripwire' strategy, there was no more important role. Thus, the expansion of the nuclear 'club' to include many other nations in the nuclear delivery mission was a strategic imperative. In most European nations, the nuclear question had intense political connotations. None more so than in West Germany. The ruling Christian Democratic Union favoured West German membership of the 'nuclear' club, the opposition Social Democratic Party did not.[35] As the fledgling Luftwaffe struggled to meet its targets for growth, the nuclear issue threatened to develop into a full-blown international row. That this did not happen is again testimony to the wisdom and judgement of those senior officers in the Luftwaffe and the Royal Air Force who worked harmoniously on the readiness and capability of the tactical force elements – leading by example: moral courage, instinct, knowing what is right, not by following political diktat.

As the 1950s ended, NATO tactical air forces had achieved a great deal – air forces were in place, trained and ready. But, as the threat developed, what to do about it took different forms – particularly between the RAF and the USAF.[36] On the surface, the relationship between the two was closer than any coalition parallel in the history of warfare. But, when we examine this legacy in a little more detail, the cracks in the relationship were starting to show. As Robin Niellands in 'The Bomber War" has clearly demonstrated, there were divergent views on how to "bomb to win": day or night, precision or area, fighter protection or self-protection; all tactical debates which continued.

Although wartime secrecy prevented early debate, from the official histories of the 1960s onwards, the friction on policy, doctrine, tactics, targeting and – especially – command and control has been steadily revealed. There were two separate elements at work. The first element was to exert maximum influence over air strategy. By 1945, although some very senior Royal Air Force officers were reluctant to accept it, the United States Army Air Force was dominant. When the long campaign for independence succeeded in 1947, the United States Air Force leadership was reluctant to undertake garrison duties in Germany, the main effort was the development of large fleets of jet bombers with strategic reach and nuclear weapons, based in continental USA with global reach. Leadership in the Royal Air Force was similarly minded to focus research and development on air-dropped nuclear weapons and bombers to carry them.[37] Even if this was the dominant influence, Britain's continental commitment to forward defence in West Germany, later enshrined in NATO doctrine kept alive the need for tactical air power integrated into and in support of army operations.[38] This absolute focus on tactical air operations in support of the land component with independent command exercised by a British commander[39] in the strategic setting of the 'front line' forward defence of NATO led to the development of a distinct 'way' in air warfare – a 'way' largely adopted by the Luftwaffe and challenged by the US.

The debate centred on how to mitigate the increasingly dense threat environment to be (potentially) faced by those based in the Central Region of NATO. The 'new' UK view was to fly as low and as fast as possible. Many

British aircraft, avionic and weapon designs ended up being used in this manner: Canberra, Swift, Hunter, Javelin and Lightning were all to see service in West Germany flying at low level in all tactical roles. Despite the 1957 UK 'Sandys' Defence Review, the RAF retained sixteen tactical squadrons in Germany – still a sizeable force. The British 3 star commander at Rheindahlen saw himself very much as the guardian of the soul of the wartime Second Tactical Air Force.[40]

Turning to the USAF, arguably the pendulum in the relationship between the RAF and USAAF had swung towards the USAAF (never to swing back) as the Allies landed in Sicily in late 1943. As the war continued, the USAAF quest for full and final independence from the clutches of the United States Army became a complicating rather than a complimenting factor in the relationship. Henry Probert's recent biography on Harris does not downplay the Anglo-American friction from 1944 into 1945 especially over bombing strategy.[41] Following victory, discussion and disagreement on what the bombing had or had not achieved continued and accelerated. The USAAF was very quick off the mark to instigate what was to become an enormous effort: the American Strategic Bombing Survey. This fitted USAAF main effort: to gather overwhelming evidence on the effect of strategic bombing in order to accelerate the creation of a separate USAF. British efforts were much more cautious. As Noble Frankland has demonstrated in his autobiography, 'History at War', the issue of how to write the history of the air war against Germany became a politically sensitive issue.[42] The effect of unrestricted bombing on the infrastructure and people of Germany and its erstwhile Allies was having a profound (and long lasting) impact on the young servicemen within the occupying forces as they surveyed the devastation.[43]

Throughout the 1950s and early 1960s, NATO planners relied on the strategic reach of air power – jet bombers, tankers and nuclear weapons – to deter the existential threat posed by the Soviet Union. The strategy of mutually assured destruction (MAD) in the event of all out nuclear war was backed up by tactical air forces based forward in Germany (and elsewhere) in order to prevent the rapid occupation of Western Europe. As early as 1951, the rapid advance of Communist forces across the Korean peninsular required a rethink on forward basing in Germany. Military planners realised that bases too far forward could be overrun as the correlation of forces began to switch to the Warsaw Pact.[44] During the late 1950s and early 1960s, a veritable redoubt of semi-hardened fighter and fighter-bomber bases were created along the Rhine. NATO summits invariably led to declarations of unity of purpose and common cause amongst all member states with ringing declarations of national will to meet NATO force goals. The reality was somewhat different. Conventional force levels rarely increased in line with declarations of political intent. NATO strategy was, in reality, dominated by reliance on nuclear weapons. It was not until 1967 - following the Harmel Report - that NATO moved towards a strategy of Flexible Response, which meant a much greater reliance on conventional weapons and air power[45]. By the early 1970s, following a further re-equipment programme with F-4 Phantom, Buccaneer and Jaguar (later Tornado),

the UK settled on a force structure of twelve fighter, attack and reconnaissance squadrons based in West Germany.[46]

The 1967 Arab-Israeli war shocked NATO. The rapid destruction of aircraft on exposed airfields led to a NATO-led programme of fully hardened and dispersed airfields in order to protect vital tactical air assets. Ironically, by the

Luftwaffe F-4F Phantom

time the NATO airfield programme was complete in the early 1990s, UK and US aircraft were 'plinking' hardened aircraft shelters in Iraq with Precision Guided Weapons – in an environment of near-absolute air superiority shelters proved to be no palliative. The Luftwaffe embarked on a similar re-equipment programme with Tornado replacing F-104 in the strike/attack and tactical reconnaissance roles and updated F-4 Phantoms in the air defence role. Thus, by the mid 1980s both the RAF and the Luftwaffe had re-equipped in the strike/attack and reconnaissance roles with aircraft specialised for low level penetration of Soviet air defences. As the density of Soviet air defences increased, so western tactics, techniques and procedures developed at a pace in the 1980s faster than in the previous three decades. Tactical developments were honed by series of exercises and evaluations within a multinational command and control structure.

The camaraderie developed in 1955 between the Luftwaffe and the Royal Air Force continued to grow throughout the Cold War. Annual exercises, tactical flying competitions in weapon and reconnaissance proficiency, squadron exchanges, individual exchanges of aircrew: all helped to develop a close tactical relationship that was to span the decades. There was a genuine 'front line' spirit. Even if equipment differed as the Luftwaffe increasingly purchased US aircraft types such as the F-84 Thunderstreak, F-104 Starfighter and F-4 Phantom, the tactics were the same.[47]

Intelligence assessments, however, continued to paint a remorseless picture of growth in the Soviet threat with the relentless exploitation of western military technology through fair means or foul coupled with traditional Soviet strengths of radar and rocket technology. In addition, the Soviet military-industrial complex poured scarce resource into defence spending leading to the mass production of weapons, radars and, increasingly – missiles.

The USAF, however, following their experience in Vietnam, switched to medium level tactics with an emphasis on electronic jamming of both Soviet communications and radars with large aircraft and the suppression of enemy air defences with dedicated tactical aircraft. These were all tactics, techniques and procedures developed and refined during the Vietnam war. The two doctrines were not compatible. The choreography required by the USAF 'way' in tactical air war on the Central Region of NATO grew ever more

complex with composite air operations of many different types of electronic and air defence support aircraft required to protect the 'bombers' so that they could penetrate to the target. There were many echoes of the differences of view between the RAF and USAAF during the Second World War. From good-natured debates in the crewrooms of the Tactical Leadership Programme to sharp disagreements over doctrine in the air force headquarters of the Central Region of NATO, dissension mounted. From the mid 1970s, the debate continued until 1989. The USAF view was that aircraft losses in Vietnam to Soviet-supplied, radar-directed anti-aircraft artillery fire (AAA) became a decisive point in US air operations, tipping the balance against low level tactics. US aircraft such as F-15 and F-16, could operate at low level (less than 500 feet above ground), but were optimised for medium level (above 15,000 feet). The culmination of the debate on tactics concluded in a restructuring of NATO air forces in the Central Region of NATO in 1974. A new 'coordinating' air headquarters: Allied Air Forces Central Europe was created at Ramstein. The commander, a USAF four star, would in the event of hostilities allocate effort between TWO and FOURATAF. Although compliant with the air power dictum of centralised control, decentralised execution, the new headquarters did little for the integrated nature of air/land operations, which had been the byword of TWOATAF from 1952 until 1975.[48]

As the Cold War ended unexpectedly following the 'velvet' revolutions of 1989, both the UK and the USAF way in air war was to face a serious challenge in the Middle East. At the time of the first Gulf War, the entire RAF tactical front line was optimised for the predicted low-level conflict with the Soviet Air Force. The Tornado (both variants) and specialised weapons such as the JP233 airfield denial weapon represent this tactical legacy. In the 1991 Gulf War, human flexibility and ingenuity won out, and a combination of UK tactics and US might prevailed. The daring and determined British low level attacks employing the combination of Tornado and JP233 set the conditions to allow unrestricted USAF medium level operations. NATO integrated training paid off; TACEVALS and the Tactical Leadership Programme ensured a common language and a cadre of tactical leaders. In addition, NATO doctrine and procedures – especially for deconfliction – were vindicated. Total air synergy through unified air effort was achieved.

Since the end of the Cold War, the RAF, the USAF and the Luftwaffe have continued to adapt to changing strategic, operational and tactical requirements. Tornados and Transalls have seen operational service in places, roles and missions that their designers could have not imagined. Recent historiography of operations in the Balkans highlights the orchestration and harmony that is needed to make combined air operations work.[49] This coordination and unity of purpose is something we must not take for granted. A new generation of airmen see air component command as the natural way of things. Maybe. As this short note largely based on Anglo-German air cooperation (hopefully) makes clear, the creation of integrated air operations in support of the defined joint campaign main effort is consistent with warfare through the ages. The spat over tactical doctrine between two tactical air forces in West Germany during the Cold War may seem irrelevant. It is not.

Contemporary complex operations in the Middle East, the Balkans and Afghanistan demonstrate the need for agility and adaptability. What we have to learn now from the founding fathers of the tactical air forces of the 1950s is the need to listen to each other. The degree of intimacy, understanding and interoperability between armies and air forces was hard won. The Luftwaffe played an equally vital role in the development of tactical air power during the Cold War.

Recent operations offer lessons unique to their strategic context, operational setting and tactical situation. Therefore, lessons must be treated with care for their generic application to future conflict. But they do offer a few constants and more than a little food for thought. Throughout the Cold War, the Luftwaffe and the Royal Air Force were 'joined at the hip' with their Army counterparts: NORTHAG/ TWOATAF. All senior airmen saw their war appointment at the shoulder of their land counterpart. This was another hard-won lesson of WWII – a lesson learned by Germany and the UK. Strategic nuclear planning saw this operational level integration drift apart. Technology offered the prospect of geographical separation with close co-ordination through advanced command, control and computing systems. This became common practice from the 1990s and is now received wisdom. But is this enough? Remember the shock of the BEF in France - fighting the war they had not prepared for – as subsequently happened to the Luftwaffe against the RAF. Now again we face the unexpected – and we may again need to challenge the status quo of command and control structures.

At the tactical level, aircrew of all Central Region NATO nations understood that close air support for their army colleagues was their most important, difficult and dangerous mission. That is why close air support training was conducted every day. Thus the 'instinctive' integration of air/land operations was the legacy of that bond created in 1955 on the reformation of the Luftwaffe. Nor should we forget the magnanimity demonstrated by those serving with the Royal Air Force in Germany towards the development of the Luftwaffe. The context is different to that of Iraq of 2003 and beyond, but there is something we can learn from both the sensitivity and constraint showed by BAFO in the post WWII period. The current way in air war requires tactical commanders able to operate comfortably in a dual role: integrated within a US-led structure, yet with the strategic awareness and moral courage to influence command decisions, courses of action and mission analysis. As we enter an era of a revolution in strategic affairs, continual operations by some or all elements of national air forces are the one constant. The tempo will shift: persistent surveillance, humanitarian support, patrol operations, focused intervention and air mobility may be the modern mantras for staff colleges in both the UK and Germany.

But we must not disregard traditional air fighting. Control of the air must not be taken for granted. Close air support missions in Afghanistan would be entirely familiar in difficulty, violence and ferocity to World War Two Luftwaffe, Royal Air Force, Soviet and USAAF veterans. All generations of airmen need to study the past and grasp the present in order to understand the

future. The co-history of the RAF and the Luftwaffe during the Cold War as brothers in arms provides a very useful pointer of what can be achieved by unity of purpose.

Notes

1 See Terraine. J, The Right of the Line, Hodder, London, 1985 for the most closely argued account of the Royal Air Force in World War Two.
2 A decision taken by Truman during the Potsdam Conference held in the Cecilienhof Palace at Potsdam of the Crown Prince of Germany and relayed by special telephone.
3 A History of the United Sates Air Force in Europe, Office of Air Force History, Ramstein, Germany, 1996.
4 See C.F Shores, '2TAF', Osprey, London, 1970.
5 See Taylor. W, Royal Air Force Germany since 1945, Midland, Hinkley, 2003, for a fully detailed account of how close the cooperation became in the crucial early years.
6 See 'Royal Air Force in Germany, 1945-1993', RAF Historical Society, 1999.
7 See Mason R.A., 'Air Power, A Centennial Appraisal', Brasseys, 1994, Terraine, Op Cit for the view that the RAF applied strategic principles to air warfare and air power and the Luftwaffe was essentially a tactical force.
8 See Murray W, 'The Luftwaffe- A Strategy for Defeat' , John Murray
9 For an outstanding single volume account of the development of air power thinking, see Meilinger, P, 'The Paths of Heaven : The Evolution of Airpower Theory', Air University Press, Maxwell, Alabama, 1997.
10 TV Documentary, 'Luftwaffe Wonder Weapons', Discovery Channel, Nov 05.
11 General (later Field Marshal) Lothar von Richtofen was the ardent exponent of this type of warfare. He remained influential in the development of the Luftwaffe. As losses mounted in 1941 onwards more junior officers such as Galland challenged the orthodoxy; some such as Kammhuber in the defence of the Reich were successful; many were not. As WWII ground on the demands of Ober Kommando das Luftwaffe (OKL) became ever more detached from the tactical reality. See Murray, Op Cit.
12 See Der Lexicon des Luftwaffe, Berlin 1981.
13 Corum, J, 'Luftwaffe and the Development of Operational Art, KUP, Kansas, 1996 offers a fascinating insight into just how crucial were the experiments at Lippetsk in the Soviet Union.
14 Omissi, D, 'Air Power and Colonial Control', MUP, Manchester, 1981 offers a compelling account of just how focused the Royal Air Force became between the wars on imperial support operations.
15 The notable exception was Air Marshal Sir Arthur Barratt, the Royal Air Force Air Component Commander during the Battle for France, later the Commander-in-Chief Army Cooperation Command.
16 In the UK and Germany there is much talk of network enabled or network centric warfare. Any visit to the Command Bunker at RAF Uxbridge or the Sector Operations Centre at RAF Digby would demonstrate the strength, flexibility and resilience built into the UK Air Defence Network – which had steadily evolved from the original concept developed to defend London during the First World War.
17 See Wykeham.P, Fighter Command, A Study of Air Defence, 1914-1960, Putnam, London, 1960, for a definitive account of how the air defence network of Great Britain was developed.
18 An excellent contemporary view on the Luftwaffe can be found in 'The Rise and Fall of the German Air Force', Air Ministry Pamphlet 248, HMSO, London, 1948.
19 See, Steinhoff, J. 'Straits of Messina', Fontana, 1981 for a fascinating account of Squadron life in the Luftwaffe from 1942 to the end of the war.
20 Overy, Richard, 'Why the Allies Won', Jonathan Cape, London, p 122-133.

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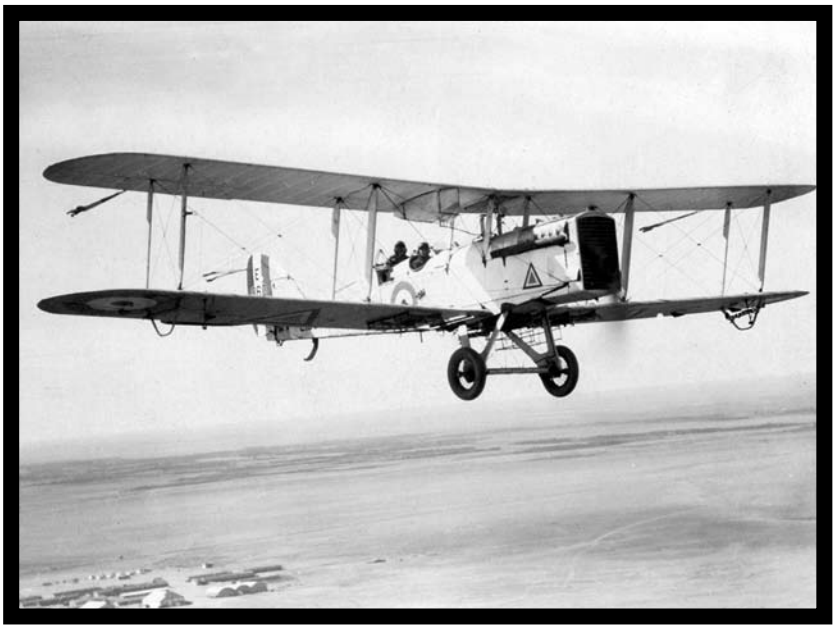

A DH9A ('Ninak') of No 84 Squadron over Shaibah, Iraq

Ruling the Empire out of the Central Blue

The Royal Air Force and Counter-Insurgency (COIN) Operations in the Inter-War Period

By Dr David Hall

The history of the Royal Air Force throughout the inter-war period is inexorably linked to two distinct paths of development: strategic bombing and imperial policing or air control.1

In 1919, the former was little more than a revolutionary theory for waging future high intensity war without having to either engage in or endure the horrific campaigns of attrition characteristic of much of the recently ended fighting on the Western Front. The latter was a cost-effective application of air power in response to a growing number of post-war security problems around the Empire. At a time when the government slashed the defence budget, and questioned both the affordability and the military necessity of an independent air force, air control and imperial policing ensured the survival of the RAF.

Air Marshal Sir Hugh Trenchard, the Chief of the Air Staff (CAS), proved to be an able champion for his Service. In RAF circles the story was often told in legendary form and acted out in pantomime. The air force was the beleaguered maiden, the army and the navy were the dragon and its mate, and Trenchard was St. George.[2] Sadly, there was a lot of truth behind this imagery. Throughout the 1920s and at least the first half of the 1930s, the RAF did wage a desperate fight in Whitehall just to survive. Writing about this period at a much later date, Marshal of the RAF Sir John Slessor wrote: '... the fact is that during the formative years we were literally battling for the life of the RAF against the forces of military reaction'.[3] Trenchard, to his credit, saw very clearly that if the RAF was to remain an independent Service it needed not only a strategic justification but also an immediate, visible and practical role.

The senior Services had always assumed that the independent air force was an aberration of the last war and that it had nothing to contribute to the traditional imperial responsibilities of the armed services during times of European peace. Their feelings about the post-war RAF were clear: the sooner it was broken up the better. Trenchard remained defiant. He was determined to keep the RAF alive and independent. His rationale for maintaining a separate air service rested on his firmly held conviction that neither the War Office nor the Admiralty had either the ability or the desire to advance the development of air power properly. Responding to one of many General Staff memoranda, which claimed that air forces were nothing more than an appendage of the senior services, Trenchard wrote:

> *The nation that considers and develops its air forces as an auxiliary arm to the older services will suffer a rude awakening if faced by a nation which has recognised that the air may become a primary medium of war and has developed its air power accordingly*.[4]

In his endeavours to work out the RAF's salvation, Trenchard found an unlikely ally in Winston Churchill, Secretary of State for Air and War, and the very minister originally appointed to 'close up' the new service. Significantly, Churchill also had a keen interest in the British Empire. He worried about the long-term state of imperial security in the light of the government's drive for economy and the savage defence cuts. Churchill saw in air power the great possibility of a marriage between economy on the one hand and the maintenance of law and order around the empire on the other. Should it work, he believed that small numbers

of aircraft and local levies might be substituted for large numbers British troops and expensive garrisons.[5] Trenchard too had given serious thought to a similar imperial role for the fledgling RAF. In a memorandum dated 14 August 1919, the CAS pointed out the large scope that existed for independent air forces to carry out small imperial policing operations more economically and more expeditiously than ground forces.[6] Over the next four months a series of memoranda passed between Churchill and Trenchard in an attempt to work out the details. Together they produced a scheme for controlling native populations in underdeveloped areas by using small mobile forces that combined aircraft, armoured cars and local levies. By early December their work was complete. A Command Paper was published and Churchill presented its contents to both Houses of Parliament.[7]

Air control and home defence were to be the twin pillars of the RAF's peace-time raison d'etre. Trenchard had not given up on the strategic bombing role. It was the core of the independent air force's original mandate, and he believed it would play a predominant role in European warfare in the future. In the meantime its development would have to wait. By accepting new imperial responsibilities the CAS had wisely elected to operate within the government's new guidelines of economy. Success in this role to a large degree preserved the RAF's independence during the early twenties.[8]

British Somaliland, 1919

The RAF's first opportunity to demonstrate its new imperial policing role came at the end of 1919 in British Somaliland (now Somalia). Since

DH9s of Z-Force at Berbera

the 1890s colonial administration in this British protectorate had been threatened by the political ambitions of a charismatic Muslim cleric Said Mohammed Bin Abdulla Hussan, more colloquially, if unfortunately, known as the Mad Mullah. Before the 1914-1918 War the British Army mounted four punitive expeditions against this religious fanatic and his following of up to 10,000 Dervishes. All four had proved to be expensive and inconclusive. Each time the Mullah survived to resume his violent practices against his fellow countrymen and British rule alike. During the Great War the British government ignored the problems in Somaliland but in 1919 it resolved to settle accounts. The Army, however, was not so enthusiastic. Reluctant to become involved in yet another protracted imperial venture, the War Office submitted an exaggerated estimate of the cost of a further punitive expedition: an expeditionary force of two or three divisions at the cost of several million pounds. Sir Geoffrey Archer, the Governor of the Protectorate, suggested an alternative approach.[9] He proposed the use of air forces as a costcutting measure and as a way to reduce to a lower scale the number of British soldiers required for the operation. His plan called for the deployment of

a joint force that included one RAF squadron working in collaboration with the local gendarmerie regiment, the Somaliland Camel Corps and a battalion of the King's African Rifles. The General Staff scoffed at this suggestion. They claimed that such a campaign would be a total failure and that ultimately the Army would have to be called in 'to rescue [the] aeroplanes and clear up the mess' in extremely unfavourable circumstances.[10]

Ignoring the complaints made by the War Office, the Air Ministry and the Colonial Office decided to press ahead with their plans for the up-coming joint campaign. In January 1920, a RAF detachment, including one flight of six DH9 reconnaissance/light bombers and a further flight of six DH9s in reserve, concentrated at Berbera under the command of Group Captain R Gordon. Known as 'Z Force', the limited number of RAF aircraft began operations on 21 January with a series of surprise raids on the Mullah's forces, bombing and strafing both them and their traditional stone forts. These few RAF aircraft struck a powerful psychological blow against the Mullah's own headquarters and drove his harried forces out of their fortifications. By mid-February the dispersed Dervish forces had been rounded up by the troops of the Somaliland Camel Corps and the King's African Rifles. Although the Mullah himself managed to escape with a few followers into neighbouring Abyssinia he never set foot in the Protectorate again. The campaign had been a complete success and it was accomplished at an astoundingly low cost of only £84,000.[11]

Iraq 1920-1932

Less than a month after Z Force's stunning success in Somaliland the RAF was offered five to six million pounds to accept full responsibility for policing Mesopotamia (Iraq) and Jordan. Turkish designs on the region, escalating financial costs of maintaining authority, worryingly high casualty returns, and the RAF's recently proven success, convinced the government that it should continue the experiment with air control. Two years would pass before the Air Force assumed this leading role but during the interval the government stayed the course on its far-reaching decision to hand over the main responsibility for Iraq to the RAF. The transfer of authority proceeded despite extreme War Office opposition, including the General Staff's desire for a 'total and immediate evacuation' of the region rather than accede to the new RAF mandate.[12] Policing the empire soon became the main effort of the small RAF. In 1921, the front-line strength of the RAF numbered some 19 squadrons. Five were based in the UK (four army co-operation squadrons and one fighter squadron) and the rest were deployed around the empire. Of the RAF's remaining fourteen squadrons, five were stationed in Egypt, four each were deployed in India and Iraq and one was posted out to the Far East.

On 1 October 1922, the RAF took over control of all British military forces in Iraq.[13] Under the command of Air Vice-Marshal Sir John Salmond, the joint force consisted of eight RAF squadrons and four RAF armoured car companies, 15,000 Iraqi levies and police, and six Indian army brigades and supporting troops. The financing of these substantial ground forces came from the Iraqi state treasury and the Indian state military budget respectively. Thus, when the government announced

that all British army forces had been pulled out of Iraq at great savings to the taxpayer it was technically telling the truth on the financial benefits of 'substitution'. Land forces, however, along with the force multiplying effect of flexible air forces, played a major role in maintaining order in Iraq throughout the whole period of the British mandate.[14]

Sopwith Snipes of No 1 Squadron near Hinaidi, 1923

RAF operations against Kurd and Arab rebels were more extensive and varied than the simple bombing attacks of Force Z on overawed Somalis. Independent bombing attacks against enemy strongholds played their part but Salmond's squadrons also supported British and Indian troops in major brigade strength battles against well-armed and determined Iraqi insurgents. RAF operations throughout the 1920-1923 rebellions had much more in common with large-scale conventional war than merely repressive air policing. The air forces were engaged in fairly constant reconnaissance and bombing missions in support of the ground forces, flying troops and supplies into troubled areas, and the world's first air evacuation. In September 1922, in what was then an unprecedented air operation, RAF Vickers Vernon transports and DH9s lifted some 70 British troops and civilians, friendly local leaders and one dog out of harms way from Sulamaniya to Kirkuk. Taken altogether, air operations in Iraq were very cost effective and decisive in crushing the insurgents and, after the rebellions, in pacifying the region. Salmond, not surprisingly, was promoted to Air Marshal in recognition of his considerable achievements. Trenchard was also well aware of how important Salmond's successful command in Iraq was to the future of an independent air Service in Britain.[15]

The Colonial Office too was pleasantly surprised with the results, and it referred to the policy of air control in Iraq as being 'a conspicuous success'.[16] This latest triumph with air substitution encouraged the government to pursue further use of the RAF in similar circumstances in Aden, Palestine and Trans-Jordan, Egypt and the Sudan, and the North-West Frontier of India. Although the degree of overall military success enjoyed by the RAF varied considerably from region to region,[17] the resultant savings in manpower and treasure was a significant achievement.[18]

Air Control Policy and Practice in the 1920s and 1930s

Punitive expeditions to bring allegedly savage and often rebellious natives back into line were a brutal though long-established method of controlling the many disparate parts of the empire. When aircraft were added to the arsenal of Britain's imperial garrisons they provided a force multiplier: air substitution increased the repressive powers of imperial policing to the most remote and inhospitable rebel safe-havens. Extended range and greater reach were also accomplished with fewer forces thus enhancing security at lower costs in both British blood and treasure. The early experiments with air control in

Somaliland and Iraq proved to be a very effective means of projecting military power and maintaining a delicate balance of peace and stability in the more politically fractious parts of the Empire.

For many, however, air control was nothing more that blunt and brutal bombing operations. In 1921, Wing Commander J. A. Chamier wrote about the new repressive powers of air policing in the RUSI Journal: 'The attack with bombs and machine guns must be relentless and unremitting and carried on continuously by day and night, on houses, inhabitants, crops and cattle'.[19] He emphasised the brutal and indiscriminate nature of such attacks, accepting the fact that their sheer brutality had both physical and, perhaps more importantly, psychological benefits in bringing about a swift end to troublesome insurgents and terrorists. 'The threat alone in the future', Chamier concluded, 'will prove efficacious if the lesson is once properly learnt'.[20] Air control was in effect strategic bombing writ small.

The tactical environment of colonial policing did indeed seem to substantiate a key theoretical principle of strategic bombing – enemy morale was vulnerable to aerial bombardment. Early air control operations against local bandits and native rebels had proved that a short and sharp air attack often was enough to force them to surrender. Throughout the 1920s and 1930s, RAF operations in the Middle East and the Asian Sub-Continent repeatedly demonstrated the devastating moral effect of bombing on ignorant natives and simple tribesmen. Practical experience acquired from these imperial air operations was further extrapolated by J.M. Spaight to demonstrate the value of psychological attacks on large populations by mass bombing and to justify the continued independence of the RAF. Independent bombing operations 'would paralyse the enemy's higher administration and weaken his will and capacity as a national organism to continue the struggle'.[21] By 1927 strategic bombing theory and practice had gone full circle in the laboratory of imperial air control.

Assessment and Conclusion

By successfully establishing for itself a role in Imperial defence, and having persuaded the politicians of its potential value as an economic force, the RAF survived the initial threat to its independence. Nevertheless, as late as 1921 the Army still maintained operational control over a full seventy-five percent of RAF squadrons;[22] and the policy of substitution had so poisoned relations between the two services that the Army was determined to seek the abolition of the separate air force once and for all. The General Staff severely criticised the two major roles claimed for the RAF by the Air Ministry. They insisted that aircraft would be exploited to the full only when grafted onto the well-established and war-proven stocks of the older services. They also questioned the financial expense of maintaining a separate Air Ministry, and called for a searching enquiry to review future air administration and expenditure.[23] Trenchard could barely contain his anger over the War Office's latest attacks. In a draft letter to his Minister he wrote:

... one cannot argue with an Army officer [Field Marshal Wilson] who cannot see beyond the walls of his office, who cannot realise the value of mechanical appliances in substitution of manpower; who thinks

in mere masses of men, who has no conception of the value of speed and time ...[24]

Trenchard never sent the letter nor did he reply in any official capacity to Wilson's numerous slurs or his outrageous attacks on the RAF. Instead, Trenchard prepared for the pending budgetary review. Before the Geddes Committee the CAS made sweeping claims for the efficacy of air power. The Admiralty and the War Office countered with their joint claim that eliminating the RAF would provide economies. Sir Eric Geddes disagreed with the senior Services and in his report he confirmed the need for maintaining an independent air force. Moreover, whilst the Committee recommended cuts in all three services, those directed at the RAF were less drastic, and they were to come at the expense of army and naval co-operation squadrons.[25]

The promise of imperial policing 'on the cheap' had served its purpose and maintained the RAF's continued independence thereby safeguarding strategic air forces and offensive air operations as key components in Britain's national defence. It also ushered in the era of joint expeditionary operations conducted by small and overstretched British forces in an increasingly hostile and unsettled world. The RAF continued to play its part in policing the Empire throughout the 1930s but the impact of these operations on the development of air control (counter-insurgency) doctrine and policy was restricted to local stations, the operational diaries of a few squadrons and the personal scribbling of a small number of enthusiastic junior air force commanders. With Hitler's rise to power in 1933, both the British government and the Air Staff turned their attention to the more pressing matters of home air defence. July 1934 saw the promulgation of the first of eight air expansion schemes tabled between 1934 and 1939, with the National Government announcing an initial increase in the size of the Metropolitan Air Forces from 52 to 75 front-line squadrons. A further 53 squadrons were to be raised over the next five year, thereby increasing the size of the home RAF to 128 front-line squadrons. Two years later on 14 July 1936, a direct result of the air expansion schemes, the Air Council re-organised the RAF into four functional commands: Bomber Command, Fighter Command, Coastal Command and Training Command. Two additional commands were formed in 1938, RAF Maintenance Command and RAF Balloon Command, with the latter deploying some 1,500 barrage balloons by the outbreak of the Second World War. An Imperial Air Command was not considered and even army co-operation had to wait until December 1940, six months after the disastrous Battle of France, before Army Co-operation Command was formed under the command of Air Marshal Sir Arthur Barratt. Some sixty years would pass before the RAF would develop a comprehensive doctrine and an appropriate command structure to apply the full potential of air power on counter-insurgency (COIN) operations.

Notes

1 For a brief history of the RAF during the Inter-War Period see AP 3003 'A Brief History of the Royal Air Force' (Norwich: HMSO, 2004) chapter 2, pp.49-90. See also Norman Gibbs, Grand Strategy v.1 (London: HMSO, 1976) chapters XIV and XV; Sir Charles Webster and Noble Frankland, The Strategic Air Offensive Against Germany v.1 (London: HMSO, 1961) pp.1-65; Malcolm Smith, British Air

Strategy Between the Wars (Oxford: OUP, 1984); Sir Maurice Dean, The Royal Air Force and Two World Wars (London: Cassell and Company, 1979); and Sir John Slessor, The Central Blue (London: Cassell, 1956) chapters II and III.

2 Sir M Dean, The Royal Air Force and Two World Wars p.34.

3 Liddell Hart Papers 1/644: 'Some Personal Reflections by MRAF Sir John Slessor' (September 1964) p.6.

4 The National Archives (henceforth TNA) AIR 8/2 Remarks by the Chief of the Air Staff on War Office Memorandum, 30 May 1921.

5 Martin Gilbert, Winston Churchill v.IV, 1917-1922 (London, Heinemann, 1975) p.197; also see David E Omissi, Air Power and Colonial Control: The Royal Air Force, 1919-1939 (Manchester: Manchester University Press, 1990) pp.16, 19-21.

6 Trenchard Papers: MFC 76/1/35 - Memorandum by CAS on Air Power and Imperial Defence, 14 August 1919.

7 Cmd. Paper 467, 19 December 1919.

8 TNA CAB 24/131 and 132 Interim Report of the Committee on National Expenditure CP3570, Dec. 1921 and Geddes Report CP3692; Air Commodore C F A Portal, 'British Air Control in Underdeveloped Areas', in Eugene Emme (ed.) The Impact of Air Power (Princeton, NJ: Van Nostrand, 1959) pp.351-362; Jafna L Cox, 'A Splendid Training Ground: The Importance to the Royal Air Force of its Role in Iraq 1919-1932', Journal of Imperial and Commonwealth History v.8, no.2, January 1985; and David E Omissi, Air Power and Colonial Control pp.21, 29.

9 TNA AIR 2/12 Reports on Air Control (1920-1933); and AIR 10/1367 Notes on the History of the Employment of Air Power (1935).

10 Wilson to Trenchard in Andrew Boyle, Trenchard (London: Collins, 1962) p.367.

11 TNA AIR 5/846 Operations Against the Mullah in Somaliland, chapters 1-2; Trenchard Papers: MFC 76/1/357 - Lecture III 'Operations 1919-1919 - Somaliland and the North West Frontier', pp.1-2; John Ferris, The Evolution of British Strategic Policy 1919-1926 (London: Macmillan, 1989) pp.63-64; H Montgomery Hyde, British Air Policy Between the Wars (London: Heinemann, 1976) pp.90-91; and David E Omissi, Air Power and Colonial Control p.15.

12 Jafna L Cox, 'A Splendid Training Ground: The Importance to the Royal Air Force of its Role in Iraq 1919-1932', p.165.

13 Trenchard Papers: MFC 76/1/357 - Lecture IV 'Operations 1919-1939 - Aden and Iraq', pp.2-5; John Ferris, The Evolution of British Strategic Policy 1919-1926 pp.66, 74, 87; and David E Omissi, Air Power and Imperial Control pp.29-37. For a short account of Salmond's imaginative use of air power in Iraq see H Montgomery Hyde, British Air Policy Between the Wars pp.120-127.

14 Iraq was granted independence in 1932.

15 Mark Jacobsen, ''Only by the Sword': British Counter-Insurgency in Iraq, 1920', Small Wars & Insurgencies v.2, no.2 (August 1991) pp.323-363; Jafna L Cox, 'A Splendid Training Ground: The Importance to the Royal Air Force of its Role in Iraq 1919-1932', pp.157-184; James S Corum and Wray R Johnson, Airpower in Small Wars. Fighting Insurgents and Terrorists (Lawrence, Kansas: University Press of Kansas, 2003) pp.54-57; and AP 3003 'A Brief History of the Royal Air Force' pp.64-66.

16 Leo Amery, Colonial Secretary, in Jafna Cox 'A Splendid Training Ground', p.175.

17 For critical assessment of RAF air control in the empire during the interwar years see James S Corum and Wray R Johnson, Airpower in Small Wars. Fighting Insurgents and Terrorists chapter 2, pp.51-66, 81-86; David Omissi, 'Technology and Repression: Air Control in Palestine 1922-1936', The Journal of Strategic Studies v.13, no.4 (December 1990) pp.41-63; David E Omissi, Air Power and Colonial Control chapters 5-8; and Derek J P Waldie 'Relations Between the Army and the Royal Air Force 1918-1939', PhD Thesis, King's College London, 1993, chapters 2, 5-7.

18 In 1928, Winston Churchill, the then Chancellor of the Exchequer, described air substitution as 'a great achievement', in H Montgomery Hyde, British Air Policy Between the Wars p.229.

19 Wing Commander J A Chamier, 'the Use of Air Power for Replacing Military Garrisons', RUSI Journal no.66 (February/November 1921) pp.210.

20 Ibid.

21 TNA AIR 8/87 'The Doctrine of Air Force

Necessity' by J M Spaight (1927).
22 John R Ferris, The Evolution of British Strategic Policy 1919-1926 p.83.
23 TNA CAB 5/4 CID Paper 150-C, 28 September 1921.
24 TNA AIR 9/5 Letter from the CAS to Secretary of State for Air, September 1921.
25 TNA CAB 24/131 and 132 Interim Report of the Committee on National Expenditure, CP3570, December 1921 and Part I of the Geddes Report CP3692; and John R Ferris, The Evolution of British Strategic Policy 1919-1926 p.90.
26 See David Ian Hall, 'Lessons Not Learned: The Struggle Between the RAF and the Army for the Tactical Control of Aircraft and the post-mortem on the defeat of the BEF in France 1940', in Geoffrey Till and G.D. Sheffield (eds.) The Challenge of High Command in the British Armed Forces (London: Macmillan, 2003) pp.113-125.
27 See Harry Kemsley, 'Air Power in Counter-insurgency: A Sophisticated Language or Blunt Expression?', Contemporary Security Policy, Vol.28, No.1 (April 2007) pp.112-126.

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A Lockheed F-161 Sufa (Storm) of the Israeli Air Force

Israel's 2006 Campaign in the Lebanon

A failure of air power or a failure of doctrine?

By Gp Capt Neville Parton

The title of this article might be seen as an attempt to be deliberately provocative, but in fact it merely reflects what appeared at the time to be the most general understanding of this particular campaign within the more thoughtful elements of the media. In fact, headlines for articles during the course of the conflict ranged from 'Air power won't do it' (*The Washington Post* 25 July 2006), through 'Air power assumptions shot down' (*Reuters* 2 August 2006) to 'The illusion of air power' (*The Economist* 24 August 2006). Enough, certainly, to make any serious exponent of air power wonder exactly what had happened, and perhaps more importantly, why. If any further justification were needed, the resignation of General Halutz, the first-ever airman to be the Chief of Staff of the Israeli Defence Force (IDF), due solely to the performance of the IDF during the conflict undoubtedly provides it.

In fact this campaign, for a number of reasons, is one to which not just air forces but armed forces in general around the world should be paying particular attention, and it is highly likely that there will be more and more 'lessons learned' that will be drawn out as the facts become more widely available[1]. However given the limits of a short article, this particular paper will limit itself to answering one central question, which is, quite simply, did air power indeed fail to deliver in the 2006 Lebanon conflict? Yet in order to answer that it is necessary to consider the definition of failure which was either defined or implied by the articles already mentioned. Helpfully, all of these centred around the same point – that air power throughout its existence has promised to be a 'silver bullet' solution to military problems by producing independent strategic effect, but has consistently failed to do so. Or in other words, it is suggested that there is a fundamental problem with the theory that underpins air power's ability to produce such effect by itself. This allows a more precise question to be framed, which is: did the Israeli use of air power in the Lebanon illustrate a failure of underpinning air power theory which resulted in the inability to achieve the desired strategic end state? One caveat needs to be raised before proceeding any further, which is that this paper is entirely based upon open-source material, and not on the basis of any privileged information. In terms of organisation it will consider the background to the conflict, provide an overview of the campaign, and analyse the aims and end states before answering the question and drawing some lessons in conclusion.

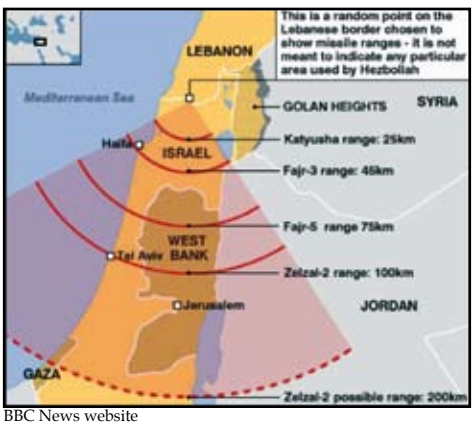
It is hard to imagine now, but for the first two decades of its existence Israel's border with Lebanon was one of its most secure. However, all that changed when the Palestine Liberation Organisation (PLO) began to establish itself in the area, initially in 1967 after the defeat of the Arab forces in the Arab/Israeli war that year, but significantly reinforced in 1970 when the PLO was effectively evicted from Jordan. From this point onwards, cross-border terrorist activity steadily grew – and with it the question as to how Israel was to respond. Initially this took the form of artillery bombardments, air strikes, and raids against likely targets, but as Lebanon fell into civil war and much of it came to be influenced by Syria, Israel felt this was insufficient, and in 1982 it invaded Lebanon, reaching Beirut within a week and establishing a buffer zone South of the Litani river. But instead of being able to impose its will within the country that it occupied, it found itself fighting a counter-insurgency campaign that would last for the entire 18 years of it's occupation – and it was during this time that the organisation that now known as Hisbollah[2] grew up amongst the Shi'ite

communities of Southern Lebanon, gaining support first from Syria, and then latterly from Iran.

However, Israel's experience during its long and bloody occupation of Lebanon convinced it that such an approach was to be avoided again if at all possible. Accordingly a new doctrine was developed by the IDF Institute for Campaign Doctrine Studies[3] (ICDS) after the withdrawal from Lebanon in 2000, and the first public version appeared in an academic paper entitled "The Vulture and The Snake".[4] Although this is a long and detailed exposition regarding the use of air power in countering guerrilla warfare, the basic concept was that Israel would rely upon its proven air supremacy to build an asymmetric advantage. Under this construct the Israeli Air Force (IAF) would become the predominant offensive element (the vulture) that would operate against the terrorists or guerrillas wherever they were located (the snakes). This would require a combination of elements: uninhabited air vehicles (UAV) to provide persistent surveillance, fast jets and precision guided munitions (PGM) for kinetic effect, a robust and rapid C2 system to allow time-sensitive targets (TST) to be dealt with, and helicopters both for strike and air manoeuvre operations. Ground forces would be expected to operate in defence of Israel's borders, but offensively would only be used in small, rapid operations in enemy territory to handle particular groups of the enemy who could not easily be dealt with from the air or where the aim was to capture individuals or equipment. In other words, such actions would effectively only use Special Forces (SF). The overall concept was heavily reliant upon the fact that 'aerial dominance' would produce battle-winning results, and was politically acceptable because it meant that known weaknesses in the IDF ground forces could be ignored. It also played to a long-standing Israeli preference to use technology as a means of avoiding losses of their own people in ground warfare, especially in urban areas. Whilst not an effects-based approach in its own right, the doctrine came to be associated with the introduction of effects-based methodology and taxonomy into the IDF, again led by the ICDS. The concept appeared to have worked relatively well on the West Bank, when dealing with Hamas, and had also been exercised, at least at command level, against other possible scenarios. Indeed an exercise was conducted in June 2006 based, rather presciently, on the kidnapping of an IDF soldier by Hisbollah.[5] In the exercise, the IDF launched a short but intense air and land stand-off campaign against Hisbollah, to which Hisbollah responded with rocket attacks on Israeli towns. The IDF countered with a ground operation whereby three divisions took over Southern Lebanon and during the course of a month, operating closely with aerial support, destroyed Hisbollah's ability to operate in the area.

Hisbollah's doctrine is more difficult to determine, although achievement of their longer-term political objectives certainly shapes all of their activity.[6] But what is clear is that they had studied Israel's doctrine very carefully, as well as looking at their practices as evidenced in the Palestinian territories, and it is probably safe to say that such concepts and doctrine as they did possess was based around enabling the organisation to survive an Israeli attack and continue to operate, and at the same time being

able to strike at Israel itself, and to confront Israel in the area where it had traditionally prided itself – the performance of its fighting troops on the ground. The other element that should be made clear at this point is the extent to which Hisbollah had been armed and advised by Syria and Iran during the preceding years. In particular a wide range of missiles had been obtained, with much greater capabilities than the Katyushas which had formed the bulk of their offensive capability in the past. A range of surface-to-surface, surface-to-air, anti-shipping and anti-tank missiles had entered the inventory, including the Fajr 3 and 5, Zelzal 1 and 2, Raad 1 and Khaibar 1 surface to surface missiles.[7] Other weapons believed to have been used by Hizbollah include the C-802 or C-701 Chinese anti-ship missile, and a range of anti-tank systems such as the AT-3 (Sagger), AT-4 (Spigot), AT-5 (Spandrel), AT-13 (Metis-M) and AT-14 (Kornet-E).[8] The ranges of some of the surface-to-surface weapons are shown in figure 1. Although details were obviously sketchy, in 2004 the Head of Israeli Intelligence had suggested that Hisbollah probably possessed around 13,000 missiles, with a small but significant percentage of the longer range weapons in their inventory.



BBC News website

Having thus established a degree of context, it is time to look at an overview of the campaign itself, viewed on a week-by-week basis.[9] This began with the Hizbollah attack on Israeli forces on the Lebanese/Israel border, where in a well-prepared action on 12 July 2006 they abducted two IDF personnel, destroyed an Israeli main battle tank, killed eight soldiers and injured a further six. The Israeli government immediately stated that it held the Lebanese government responsible for the actions of Hisbollah, and even though the Lebanese Prime Minister and Parliament denied any knowledge of the raid and publically stated that they did not condone it, Israel commenced a massive military operation from the air. The head of the IDF, General Halutz, threatened that unless the prisoners were freed then the IDF would 'turn Lebanon's clock back 20 years'. The initial approach chosen was to blockade Lebanon, signalled by the attacks upon Beirut's international airport, and destroying road links to prevent re-supply. At the same time strikes were undertaken to remove Hisbollah's military capability by destroying its leadership and command and control functions, along with its weapons. However whilst Operation 'Change of Direction' (also known as 'Just Desserts' and 'Appropriate Retribution') was being launched, Hisbollah responded with a missile attack against Haifa – the furthest South that it had ever managed to reach into Israel. The following day an Israeli Sa'ar 5-class missile boat, *INS Hanit*, that was blockading the waters 10 nautical miles off of the Lebanese coast was severely damaged after being hit by a C-802 (Yingji-82) anti-ship missile, with four sailors killed.[10]

The first two weeks saw the Israeli forces attempting to put their pre-war doctrine into practice with a considerable concentration of force being applied from the air, averaging over 200 sorties a day, but although air strikes were credited with having destroyed five long-range and ten short-range missile launchers in the first few days, they were unable to prevent Hisbollah from firing over 700 missiles into Israel during the first week of the war. Moreover the rocket strikes did not just pose a random threat to the civilian population; they also caused significant damage to a regional air base within Northern Israel that was involved in directing the campaign, and forced the move of an IAF logistics and maintenance centre for its Apache and Cobra attack helicopters to the South of the country. Considerable use was made of UAVs to provide round-the-clock surveillance and direct strike activity, but some targets proved particularly difficult. A raid against a single Hisbollah headquarters facility saw 23 tons of ordnance dropped to no apparent effect, and whilst road links to both Beirut and Southern Lebanon were systematically destroyed to prevent the possibility of re-supply, the flow of rockets against Israel continued unabated. Indeed during the course of the conflict over 5,500 Israeli homes were hit, 300,000 civilians displaced, and up to a million were regularly having to move into bomb shelters, effectively paralyzing normal life throughout a third of Israel's territory. Hisbollah's television and radio stations remained on the air, and meanwhile worldwide public opinion began to show evidence of disquiet regarding Israel's attacks against Lebanese civilian infrastructure targets such as water facilities, electrical plant, fuel supplies, hospitals and industrial sites and factories.

Katyusha missiles being launched

The third week saw the struggle moving into a new phase, as Israel began to move into Lebanon, with two brigades in operation – firstly in the village of Marun Al-Ras, and then in the town of Bint Jbeil – whilst an additional three divisions of reservists (15,000 troops) were mobilized. An aerial assault was carried out against a hospital in Baalbek, an area described as a 'Hisbollah stronghold', with the intended target of the raid reported to have been a senior member of Hisbollah as well as a Lebanese representative of the Iranian spiritual leader, Ayatollah Ali Khamenei, although the IDF denied that this was the case. The deaths of four unarmed UN observers after an Israeli air strike hit their observation post added to international pressure regarding the nature of the Israeli air campaign. Although there was no let up in the aerial campaign over Lebanon, Hisbollah continued to launch significant numbers of missiles at Israel, peaking at around 130 in one hour. Even though the majority were the short-range Katyushas, others were landing 50-75km to the south of Israel's northern border. There was also by this point a public disagreement between Mossad which stated that it believed that Hisbollah was capable of continuing fighting at the current level for a long time, and military intelligence which believed Hisbollah had been severely damaged.

Military academics began to question publicly the Israeli reliance on air power in the current operations.

By the fourth week three IDF divisions were operating in Lebanon, but still struggling against Hisbollah's first line of defence – the Nasser brigade. The IAF continued to attack Hizbollah targets within Lebanon, as well as more general infrastructure targets, and Hizbollah's leader vowed to strike Tel Aviv in retaliation for Israel's bombardment of Beirut. The Israeli Defense Minister announced that he had instructed the IDF to prepare for 'a swift takeover of the entire area south of the Litani [River]' and to operate in all the areas where rockets had been launched, which would represent an incursion of around 30 km. After bombing the last land routes into Beirut, and effectively cutting off the Lebanese capital from relief supplies, Israel issued a statement saying the attacks were designed to thwart Syrian attempts to re-supply Hisbollah. Almost simultaneously Hisbollah rockets struck Hadera, about 40km north of Tel Aviv, the southernmost point the Islamic militia reached with its attacks during the conflict, and fifteen people were killed in a single day by Hisbollah's deadliest wave of rocket attacks on Israel since fighting began. A UN Security Council vote on a resolution to end the conflict was delayed, and the Arab League accused the UN of doing nothing to solve the crisis, saying that the conflict would sow 'the seeds of hatred and extremism across the Middle East'. Israeli military officials announced that the Israeli army was now holding land up to 8km inside Lebanon, and that they were expanding their ground offensive, pushing troops up to 20km over the border – but it was only on the 29th day of operations that the Israeli cabinet approved a significant expansion of the ground operations – four days before the ceasefire came into being.

The final week of the conflict saw intense activity, both military and diplomatic, leading up to the ceasefire. The UN humanitarian relief coordinator criticised both sides for not stopping fighting for long enough to allow aid to reach 120,000 civilians who needed help in southern Lebanon. Meanwhile Israeli forces made their deepest push into Lebanon, with some troops reaching the Litani River, whilst Hisbollah continued to fire considerable numbers of rockets into northern Israel (200 on the last day of the war) and put up fierce resistance to Israeli forces on the ground. On Sunday, 13 August, the prime ministers of Israel and Lebanon agreed to a cessation of hostilities beginning at 0500 GMT on Monday 15th, whilst the Israeli cabinet approved a UN resolution calling for a halt to the month-old war in Lebanon, and at the same time also asked the US government to speed up delivery of short-range anti-personnel rockets armed with cluster munitions,[11] which it could use to strike Hisbollah missile sites in Lebanon. Some of the fiercest fighting of the month-long conflict took place in the final hours running up to the UN ceasefire coming into effect. At 0500 GMT guns fell silent, although with isolated incidents reported across southern Lebanon.

It is difficult to give an idea of the absolute military overall scale of the campaign in such a short space, but the statistics below, largely based upon data issued by the IDF, should help to fill in the gaps.

Length of conflict: 33 days
Overall Casualties:
Israeli: 119 military, 41 civilians
Lebanon: 500 Hisbollah 'fighters', 900 civilians (approximate)
Israeli Air Force:
Manned: over 10,000 fighter sorties
Unmanned: over 16,000 fg hrs
Discrete targets struck: over 7 000
Aircraft lost: 5 (1 shot down, 4 lost due to accidents)
Israeli Army:
Artillery shells fired: over 100,000
MBTs lost: 20 (14 to ATGMs, 6 to mines)
Hisbollah:
Rockets fired on Israel: 3,970
Rocket launchers destroyed: 126

In terms of analysis, consideration of the aims of both sides in this conflict is vital as military activity in and of itself is not purposeful, but requires some desired political end state in order to give it rationality. While it may appear to make sense to look at Hisbollah first, as they were the initial aggressor, it is simpler to begin with the Israelis since their objective are much easier to ascertain. Two key aims were outlined by the Israeli government to the world at large: first to free its abducted soldiers, and secondly to remove the terrorist threat from its Northern border by destroy ing Hisbollah. As is often the case of course, public statements and internal policies whilst linked may be slightly different, and it appears three aims were outlined by the Israeli government and handed to the IDF to translate into an operational level plan. The first of these was to create the conditions for the return of the prisoners, the second to damage significantly Hisbollah's military capability, and the third to coerce the Lebanese government into assuming more effective sovereignty over Southern Lebanon. To this the IDF added a fourth aim of its own, which was to strengthen Israel's deterrent image with its Arab neighbours[12].

Hisbollah's aims are more opaque, but it seems highly likely that they regarded their activity on 12 July as being at a 'normal' level – that is not significantly escalatory – and aimed at securing prisoners who could be used in their own long-standing campaign to gain release for prisoners held in Israeli jails. Certainly comments made after the war by Sheikh Nasrallah indicated that Hisbollah were taken aback by the strength of the Israeli response[13]. Another suggestion is that Hisbollah's principal backers, Syria and Iran – each with their own agenda – were looking to see some return for their significant investment. What is beyond doubt is that even if they did not expect the response that did occur, they were not found wanting in terms of preparation, a point we shall come back to later. In one way Hisbollah's war aims could be seen as simply being defined by those of Israel: if Israel wanted to release the prisoners and destroy Hisbollah, then all Hisbollah needed to do to 'win' was to retain the prisoners and remain in being.

So having considered what the aims of both sides were at the beginning, we need to look at the actual end state. Taken on one level this is quite straightforward – the prisoners had still not been released[14], and Hisbollah remained in being, with a considerable portion of its inventory intact. Martin van Creveld suggested, two months after the conflict ended, that the final end state might be more advantageous for Israel than it appeared at first sight, with a neutral force inserted between Israel and Hisbollah in southern

Lebanon, and a ceasefire that appeared then to be holding[15]. Hisbollah's leader also implied that they were not content with the outcome for the Lebanese people, stating in a public interview that if they had believed that there was a one percent probability that Israel would have responded in the way they did then they would not have taken the action[16]. And what about Hisbollah themselves – they had not noticeably improved their ability to secure the release of prisoners from Israeli jails, and indeed had conceded a number of further POWs. However, what they had achieved was perhaps a greater gain from their perspective, in that they had made clear the limitations of the IDF in the starkest of forms. Hisbollah had demonstrated that it could survive despite Israel's massive military advantage, could inflict substantial and painful losses on the Israeli army (in relative terms) and above all could take the conflict to Israel itself whenever it wished through rocket attacks – in other words, directly undermining the myth of Israeli military invincibility. To some extent whether this is correct or not is immaterial: it is the perception that is important, and the popular perception amongst the Arab world, as well as in a considerable part of the West, and most tellingly in Israel itself, is that in this particular conflict, Hisbollah outperformed the IDF in most areas. In other words the 'battle of narratives', which in modern terms is often as important as the action on the ground, appeared to have been won by Hisbollah; a view certainly evidenced by the *Economist* on its cover for the week beginning the 19 August 2006 as can be seen below left.

Ramzi Haidar/AFP/Getty Images

In terms of beginning to move towards an answer with regard to air power's role, it is possible to discern two distinct threads to the IDF operational activity – the first aimed at directly attacking Hizbollah and thus reducing its military capability, and the second aimed at coercing the Lebanese government into taking responsibility for the sovereignty of its own country, and thereby reducing Hizbollah's ability to operate. So in air power theory terms, the two elements 'on trial' were firstly the ability of air power to deal substantively and decisively with an insurgency or conflict with irregular forces, and secondly the capability to create coercive effect against a state actor.

The IDF's activities were obviously planned from the outset as a predominantly air-led campaign – in accordance with their existing doctrine – and this was particularly evident in the way in which the Israeli army was called up, with decisions being made very late in the day. From the Hisbollah side, it is evident that not only had considerable preparation been made in terms of the acquisition of weapons systems, but a great deal of work had been carried out in terms of preparing hardened and secure command and

control facilities – including television and radio broadcasting services, both vital to convey Hisbollah's views and influence perceptions. Considerable work had also gone into the building of fortified positions along the border with Israel, and in some depth, with much thought given to both strengths and concealment. A high level of training and courage was also evident in their operations against the Israeli army, where despite being out-gunned they used their weapons to good effect – even if the kill to loss ratio stood at approximately 5 to 1 overall in the Israeli's favour.

The crater caused by a weapon released from an Israeli Air Force aircraft

Taking the question of air power in counter-insurgency first, it has become very clear that the IDF's most overwhelming conclusion is that they failed simply because their doctrine was wrong, with this being blamed upon 'aerial arrogance' amongst senior officers[17]. Their development of a doctrine of counter-insurgency which effectively ignored the need for ground-based activity meant that when ground forces were eventually introduced, it had (to quote one of their reports) "created confusion in terminology and misunderstanding of basic military principles" which led to confusion at all levels from the operational down to the tactical – van Creveld tellingly states that 'units continued to receive contradictory, ever-changing orders'[18], and the team who investigated the General Staff's performance concluded that 'General Halutz was unjustifiably locked on the idea of an aerial campaign, postponing time and time again the launch of ground manoeuvres'[19] and when land operations did begin 'forces were not given specific objectives and time frames to attain them'[20], which may be a side-swipe at the effects based approach as applied under their extant doctrine. The clearest indication of a change in approach has come in the form of the IDF's work plan for 2007, which sees 'a significantly larger investment in ground forces, after years in which the air force was favoured over other services.'[21]

In terms of the coercive nature of the air campaign, putting aside any questions of legality regarding the targeting of significant portions of the civilian infrastructure, the fundamental feasibility of the approach must be considered. Israel was keen throughout the conflict to compare their actions with NATO's operations with regard to Kosovo[22], and they themselves made clear that they were attempting to coerce the Lebanese government into undertaking particular courses of action. But the Lebanese parliament was split almost down the middle, with attitudes towards Syria and Hisbollah marking the dividing line. Of the 128 seats in the parliament, the anti-Syrian camp had a small majority (72 seats) – although this was an alliance grouping, and the Prime Minister's party only had half of these

seats. The rest of the seats belonged to pro-Syrian and pro-Hisbollah factions, who thus held a commanding position within the parliament (and indeed hold two government appointments). Without descending too much into the complex and finely-balanced world of Lebanese politics, what is clear is that the Prime Minister's authority was quite limited – certainly when it comes to any authority over Hisbollah – which makes the situation very different in terms of the likelihood of a successful coercive approach compared with the situation in Kosovo, where effectively one individual had the power to turn on or turn off military action. A dogmatic approach to the application of doctrine appears to have resulted in a considerable amount of effort being expended, as well as a significant loss of life amongst a civilian population, and devastation of much of a nation's economy. All this without any appreciable gain in terms of the desired end-state or potential political advantage[23].

Returning to our consideration of air power's role, it is now possible to look at the two aspects in a slightly different light. The IDF doctrine which stressed the primacy of the IAF in the counter-insurgency role without doubt ignored some 80-plus years of previous experience and doctrine, and appears to have resulted from an over-stated belief in the impact of new technology. Fundamentally it was bad doctrine. On the coercive front however, there appears to have been a dogmatic application of doctrine without an adequate appreciation of environmental factors at the operational level. Overall then neither aspect of air power appears to have failed due to any inherent flaws in theory, but instead due to either poor doctrine or a failure in imagination and understanding in application. And whilst the doctrine writer's get-out clause which states that doctrine is 'authoritative, but requires judgement in application'[24] has become somewhat hackneyed, it is nevertheless fundamentally true – doctrine should not be applied in a checklist-type manner.

When considering the overall outcome, due precedence must be given to the (unclassified) interim report produced by the highest level examination into Israel's conduct of the war, the Inquiry Commission, which was set up in September 2006 by the government to consider all aspects of the campaign[25]. This very firmly lays the blame for the conduct and outcome of the campaign on a triumvirate of the Prime Minister, Defence Minister and Chief of Staff, with a number of extremely telling observations. Perhaps foremost amongst these is a statement that "some of the declared goals of the war were not clear and … were not achievable by the authorized modes of military action."[26] Furthermore, the decision to respond to the kidnapping with an immediate, intensive and escalatory response was not based on any detailed analysis of the situation, but instead on an impulsive reaction and a "weakness in strategic thinking". This in turn led to military activity which quite simply was unlikely to result in the achievement of a particular end-state.

In other words, returning to our original question regarding the nature of the failure in Lebanon – it is quite clear that this was not a failure of air power *per se*. Instead it represented a failure at the strategic level to define an end-state that was militarily achievable, or to consider the desired end-state and apply the most appropriate levers of power to achieve it. No form of military power was likely

to have resulted in the stated aims being achieved, and in that sense air power, at the theoretical and practical levels cannot be held culpable. However, the development of a doctrine which espoused the use of air power in ways that arguably ignored the lessons of both history and common sense is a different matter. This significantly contributed both to the immediate response, which quite simply applied doctrine and training as expected, but also to what appears to have been a dogmatic approach to the use of that doctrine, which in turn led to sterility in thinking at both the strategic and operational levels.

This should be a clear warning to any military organisation, but to air forces in particular. Whilst they have tremendous ability to create strategic effect in the right circumstances, they also do have limitations, especially in 'small wars'.[27] And whilst any strategic doctrine has to represent a statement of belief in how war will be fought in the immediate future, and the impact that changes of technology and the environment will have on that manner of fighting, unless it is equally grounded in lessons from the past it is unlikely to prove 'sound'. Certainly it could be argued that one of the key lessons from the past is that if your doctrine is based on faulty premises, so much time and effort is spent defending it that when it comes to a situation where it is needed, it tends to be applied in a very rigid manner. An intellectually-defensive stance does not encourage the free-thinking and questioning approach necessary to develop genuine strategic thinkers![28] This latter aspect certainly includes the necessity to understand, not underestimate, your opponent, and Hisbollah's ability to manipulate the media is perhaps an obvious example of this. Indeed Sheikh Nasrallah has even managed to use the Inquiry Commission report to his advantage, having been quoted as being impressed by Israel's war report, in that "it has finally and officially decided the issue of victory and defeat."[29]

One of the oft-quoted dictums in military learning is that whilst it is good to learn from your mistakes, it is even better to learn from those of others. The Lebanon campaign of 2006 presents a unique opportunity to consider a set of lessons that have been costly to obtain, and which contain much that is relevant to the type of operations that the RAF is either already engaged in, or may be in the future. The lessons may make unpleasant or difficult reading, but to ignore them would be foolish in the extreme; if they are not learnt, then the next time round it might indeed be fair to categorise the results as 'a failure in air power'.

Notes

1 Other first-pass areas identified by the Israelis as requiring further examination include intelligence, army training, air/land co-operation, media operations, littoral operations, combat logistics support and combating modern anti-tank weapons.

2 Various interpretations of the Arabic name, حزب الله (Party of God) are in use, e.g. Hizbullah, Hizbollah, Hezballah, Hizballah, and Hizb Allah, but for the sake of consistency Hisbollah is used throughout this paper.

3 The Institute was set up in 1994 both to develop doctrine and educate senior commanders (Jane's Defence Weekly, Debriefing Teams Brand IDF Doctrine 'Completely Wrong', 3 January 2007, p 7.

4 Shmuel L Gordon, "The Vulture and The Snake. Counter-Guerilla Air Warfare: The War in Southern Lebanon." Mideast Security and Policy Studies, No 39, July 1998.

5 Jane's Defence Weekly, Israel Introspective after Lebanon offensive, 23 August 2006, p 18-19.

6 Amal Saad-Ghorayeb, "Hizbollah's Outlook in the Current Conflict Part One: Motives, Strategy and Objectives", August 2006, www.carnegieendowment.

org/files/saad_ghorayeb_final.pdf

7 An insight into the selection of names for Hisbollah's missiles can be obtained from http://www.globalsecurity.org/ military/world/para/hizballah-rockets.htm

8 Anthony H. Cordesman, 'Preliminary "Lessons" of the Israeli-Hezbollah War', http://www.csis.org/media/csis/pubs/ 060817_isr_hez_lessons.pdf

9 A wide range of sources were used to compile the campaign overview, ranging from websites such as the BBC, Israeli Government, Al Jazeera and a range of American commentators, through to publications from Jane's Defence Weekly to the Economist. For the sake of keeping footnotes to a manageable length for this element, specific items are not individually referenced.

10 An Egyptian civilian merchant ship was also hit by a Hisbollah missile in the same attack and sank in a matter of minutes, although the casualty figures are still disputed.

11 The M-26 rocket, for use with the MLRS weapon system.

12 Israel Introspective after Lebanon offensive, p 18.

13 Lebanese television interview as reported on http://news.bbc.co.uk/1/hi/world/middle_east/5291420.stm ("We did not think that there was a 1% chance that the kidnapping would lead to a war of this scale and magnitude" Sheikh Nasrallah said.)

14 Indeed still have not been – and there has since been a suggestion that both of them were so seriously injured that they might not have survived the day.

15 Martin van Creveld, 'Israel's Lebanese War: A Preliminary Assessment', RUSI Journal, October 2006, p 40-43.

16 Reported via various sources – see http://www.jpost.com/servlet/Satellite?pagename=JPost/JPArticle/ShowFull&cid =1154525950456 for an Israeli perspective.

17 Jane's Defence Weekly, Debriefing teams brand IDF doctrine 'completely wrong', 3 January 2007, p 7.

18 Israel's Lebanese War: A Preliminary Assessment, p 42.

19 Debriefing teams brand IDF doctrine 'completely wrong', p 7.

20 Ibid.

21 Jane's Defence Weekly, IDF shifts focus to ground forces, 10 January 2007, p 7.

22 In fact Prime Minister Olmert made a direct (if misleading comparison) with the NATO campaign during an interview with Welt am Sonntag on 6 Aug 06 (From where do they actually take the right to preach Israel? The European countries attacked Kosovo and killed ten thousand civilians. Ten thousand civilians! And none of these countries had to suffer before also by only one rocket!) The original interview can be found at http://www.welt.de/print-wams/article145804/Sie_haben_Israel_sowieso_gehasst.html

23 Indeed, if the aim of the Israeli government was to encourage the Lebanese government to take more responsibility for security within its own borders, then it appears to have had the opposite effect with Syrian-backed elements now challenging the government at every opportunity. See Analysis: Lebanon's New Flashpoint (http://news.bbc.co.uk/1/hi/world/middle_east/6684337.stm)

24 JWP 0-01, British Defence Doctrine, p1.2

25 "To look into the preparation and conduct of the political and security levels concerning all dimensions of the Northern Campaign which started on July 12th 2006". (http://www.mfa.gov.il/MFA/Government/Communiques /2007/Winograd+Inquiry+Commission+submits+Interim+Report+30-Apr-2007.htm)

26 Ibid, para 10d.

27. In this regard it is certainly worth paying heed to the cautionary note sounded by retired USMC Colonel 'TX' Hammes, when he recently suggested that perhaps we should be concentrating on Mission Sensitive, as opposed to purely Time Sensitive, Targeting, with the emphasis being on the observe and orientate elements of the OODA loop (Thomas X. Hammes, 'Time Sensitive Targeting: Irrelevant to Today's Fights', RUSI Defence Systems, Autumn 2006, p 119-120.)

28 An example is the RAF's defence of strategic bombing doctrine during the 1920s and 1930s, which resulted in a very rigid approach to the employment of bombers at the beginning of the Second World War.

29 http://english.aljazeera.net/NR/exeres/6A735E29-A013-47F3-B40F-62408AFDFD52.htm

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Historic Book Review

Basic Principles of Air Warfare

Written anonymously under the pseudonym '*Squadron Leader*'

Published by Gale & Polden Ltd (Aldershot) 1927

Reviewed by Gp Capt Neville Parton

The first question that has to be considered with regard to this publication is one that is similar to many early air power offerings, namely why should it be of interest to us now? It is certainly not a publication that is well known to most air power enthusiasts, and did not even receive a particularly warm reception at the time[1]. The answer is that firstly it was written at a particularly interesting point in the development of thinking about air power within the RAF, secondly that the quality of the thought which lay behind it could be seen as being a half-a-century (if not more) ahead of its time, and thirdly that the story behind its production is both fascinating and Machiavellian in equal measures – and has been the subject of a considerable degree of misapprehension. We will therefore begin by considering when it was written, and by whom, before going on to examine the contents and its route to publication in a little more detail.

The year of publication for Basic Principles, 1927, lies between the dates of issue of the two major RAF doctrinal publications of the inter-war years: CD 22 (the RAF Operations Manual) which was issued in 1922, and AP 1300 (the RAF War Manual) which was delivered in 1928. However the gulf which lay between them was greater than the relatively short period perhaps suggests, as they had fundamentally different approaches to air power in terms of the central role of an air force during war time. In other words, this was a phase when the RAF's thinking about air power was going through some considerable change, and although Basic Principles appears closer in time to AP 1300, it has a very different approach in many areas – which is what makes it so interesting, given the background and position of the writer.

The author obviously chose his pen-name with a degree of prescience, as he remained in the rank associated with the title for almost his entire career. In fact until recently there was still a degree of conjecture over the author's identity, with English referring to the fact that it was "believed to have been a Sqn Ldr C G Burge, who was Trenchard's Personal Assistant"[2]. In fact it has now been proved beyond all doubt that Burge was indeed the author[3] which is fortunate as it we can consider the individual in some detail, for this was not the first manuscript that he had succeeded in getting published – he had already produced a very readable history of the wartime exploits of 100 Squadron under the title of Annals of 100 Squadron in 1919. And the reason that he was so familiar with this was quite straightforward: he had been the CO of 100 Squadron during the last year of World War 1, and during its entire period as a Night Bomber squadron acting as part of the Independent Force operating under Trenchard's control, equipped first of all with DH9s and

later with Handley Page 0400s. However this had not been his only command; he had joined the R.F.C. from the infantry in 1915, and went on to command 3 squadrons during the Great War: Numbers 33 and 36 (both Home Defence squadrons) before moving to 100 Squadron. After the war he was at one point the Adjutant at the newly established RAF College at Cranwell, before ending up at the R.N. War College in 1925 – from where he was posted directly to the position of PA to Trenchard in July 1926. Perhaps he is best known as being the uncle to one Douglas Bader – and the man who arguably first introduced him to the Royal Air Force.

So, with the scene set, what does the book actually say regarding air warfare? Trying to synthesise down the 147 pages of ideas for a review is not easy as there is a considerable amount of original thought contained within it. The book itself consists of 7 chapters plus a brief introit[4], and does reveal a definite staff college influence, such as the use of the newly-identified (at least by the British military) principles of war, which is perhaps not surprising in that Burge probably wrote the majority of it whilst at the Naval War College. However, what is perhaps most useful from our perspective is to consider certain key areas where the author's thoughts are markedly different from those that the Ministry would reveal the following year in their War Manual.

The first is the continued emphasis throughout on the first role of an air force being the gaining of air superiority. Although this was certainly part of CD 22's thinking, it was not the case for AP 1300, which was a much more polemic piece that saw the bomber as the instrument of national salvation. Moreover the reason for the gaining of air superiority is also interesting, as this was seen as an enabler to allow the army, navy and air campaigns to proceed without undue interference – and that brings us to the second critical difference. Basic Principles is at its heart a book about the application of air power in a joint context – and a plea for the Air Force's existence to be considered along these lines. "The author does not accept the belief that the forces of the air will supplant those of the sea and the land. He prefers to regard all three services as essentially complementary." And whilst seeking a joint approach, he had a straightforward Clausewitzian understanding of the nature of war: "Economic pressure and attacks against moral may, indeed, assist in the defeat of a nation and its armed forces, but the surest and quickest method of winning a war is to defeat the armed forces of the enemy." So the emphasis on the gaining of air superiority, a truly joint approach to warfare, and a Clausewitzian approach all mark this out as vastly different from what would become official RAF doctrine less than a year later.

But perhaps most importantly Burge explicitly saw the importance of developing doctrine to take account of the impact that air power had on the strategic scene, "There is only one method of fitting our intellects to be ready for war; and that is by studying the history of air warfare, and by no means should we neglect naval and land warfare.", but bearing in mind that taking a inflexible approach was dangerous, especially as the history of war in the air was so short "To dogmatize about the employment of aircraft in war is futile, inasmuch as

we have comparatively little historical guidance to rely upon." And in terms of what air superiority actually meant, it is clear that Burge saw command of the air as analogous to command of the sea, with absolute command unlikely ever to occur. He defined air superiority as 'A state of moral and material superiority over the enemy, which prevents him from seriously interfering with hostile air operations, and at the same time denies him the successful employment of his own forces." It was seen as a precursor to all air operations on a large scale, and necessary for all land or sea operations in which air forces were going to be extensively used, with the secondary benefits of obtaining a great 'liberty of action' as you know what the enemy is doing but they are denied similar information relating to your forces. Furthermore it enables the ability to interfere directly with the enemy's forces, lines of communications and so on – with the hope that this will prove to be of significant benefit. Burge also considered that air superiority would generally be limited in both time and space, and that the key would be in gaining the right amount of air superiority over the required area at the desired time.

He also attacked head-on the concept of air power winning wars by itself, pointing out several major conceptual flaws with the view that, up until then, had probably been best expressed in Air Power and War Rights, wherein Air Forces could win war by directly attacking the moral of the population. But Burge cogently pointed out that in pursuing such an approach, a nation would leave its own land, sea and air forces open to attack by the enemy, and at the same time grant the enemy's forces considerable freedom of action.

Furthermore he came down firmly on the side of another analyst at the time, General Bird[5], in believing that the pressure which led to public opinion forcing government to sue for peace had generally come only after defeat of a nation's armed forces – as from that point on no protection of the public was possible. Another particularly effectively made point was that the approach outlined by Spaight assumed that the air forces of one power could effectively ignore those of another, which was patently not the case during the previous war, where in fact the attrition rate amongst aircraft on offensive operations had become a serious drain on the resources of all belligerents[6]. He also identified that with regard to the moral effect of bombing in the First World War, this generally had less to do with the damage caused or casualties inflicted than it did with the publicly-perceived efficacy of the efforts being made to defend them. In fact he makes a telling comparison between the belief at the time in the efficacy of attacking the moral of the enemy's population directly and the operations in the Dardanelles in 1915, and concludes that in both cases that the problem lay in an overemphasis on the advantages to be gained if the approach was successful without adequate consideration of whether the approach was likely to succeed, and if it did not what the consequences would be of failure[7].

However it would be wrong to endow Burge with infallible insight. He did suffer from a very understandable problem common to a number of contemporaneous authors, namely identifying the wrong technology in terms of future development. In his case this came in the field of naval air power, where he saw aircraft carriers as being of

limited use in the future, but considered airships far more suited to extending the influence of air forces at sea. However this is a very minor criticism in what is otherwise a tour de force of analysis and insight.

Now knowing something about the author, and the contents, it is appropriate to look at how the book has been perceived as fitting into the pantheon of air power thought. For some considerable period of time it has been assumed that it was produced at Trenchard's behest[8], in line with his publically-stated desire to find a 'Clausewitz or Mahan of the air'[9]. However in fact nothing could have been farther from the truth, as an entry in Liddell-Hart's diary for Wednesday 9 February 1927 quite clearly reveals:

Sqdn-Ldr. Burge, Trenchard's Personal Assistant, was lunching also with Raynsford and told us that after the Air Ministry had passed his book on basic principles of Air Warfare, Trenchard had banned it because he was afraid of criticism, especially from Sykes. Burge said my description of Trenchard as an inarticulate genius, incapable of rational argument or expression, fitted exactly. I offered to tell Hoare about book ban – Trenchard had said he did not wish any officer to write books...[10]

In fact, Trenchard was actively seeking to prevent publication of Basic Principles, rather than encouraging it – and from the contents it is perhaps easy to see why. This was not a book which sat confortable alongside Trenchard's own thoughts as laid out in the 'War Role of An Air Force ', nor AP 1300, as unlike them it did not proselytise the virtue of independent air operations. What is unclear is how, given Trenchard's opposition, the book did appear later that year? And why did Burge choose General Ironsides to write the foreword, with whom Trenchard had fallen out only a few years before[12]? What is certain is that not long after its publication Burge left his post as PSO, and moved to undertake a short course at the Army Staff College, from which he would retire the following year – still in the rank of squadron leader. However Burge did not completely lose influence with the Service, as he went on to be the very first editor of the RAF Quarterly (Air Power Review's spiritual ancestor!) in 1930, and also ended up as a member of the Bombing Committee during the Second World War, although it is noticeable that he never wrote any further books on air strategy or warfare.

In summary, Basic Principles is an important book in terms of air power thinking within the RAF in the mid-1920s, but not for the reasons that are generally understood. Instead of revealing the RAF's innermost thoughts on their agreed doctrine of air power, it instead reveals something of the turmoil that was going on within the Service as a clear doctrinal position was established, although as has been noted by a number of other authors that eventual position was to owe far more to articles of faith rather than cogent analysis and synthesis. But Basic Principles is also interesting in its own right as it reveals what would now be regarded as a far more mature and 'joint' approach to air power, based on an explicitly stated desire to produce doctrine based on actual lessons learned from the Great War, rather than unproven hypotheses and fanciful conjecture. The supposition that the first and most fundamental reason for the existence of an air force is to gain air superiority is one that would

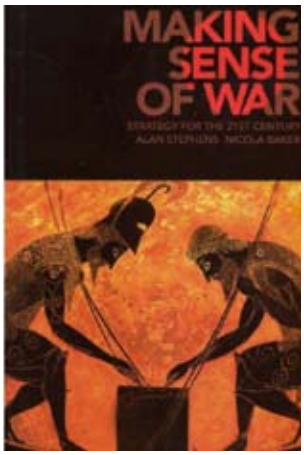
certainly meet with approbation from most modern theorists, as is the fact that the reason for gaining it is to provide freedom of manoeuvre for both land and sea based forces. The need to have a common objective at the strategic level is also one that would find much favour today. It is interesting to speculate what might have happened if Burge's doctrinal position had become the accepted learning for the RAF, and what difference in turn that might have made to the relationships with the Navy and Army during the late 1920s and early 1930s. If nothing else it makes clear the perils that can befall the keen air power theorist – and ones in those days that even an exemplary war record could not rescue you from.

Notes

1 'Review of Books', Journal of the Royal United Services Institute 72 (1927), p 468-9 ("… the work, while strictly orthodox and applicable to the period following directly on the Great War, somehow appears to lack vision as to the future."
2 Allan D English, "The Raf Staff College and the Evolution of British Strategic Bombing Policy, 1922-1929," The Journal of Strategic Studies Vol 16 No 3, no. September 1993 (1993). p 431
3 LH 11/1927/1
4 Main chapter headings were: Chapter I - Introductory, Chapter II - Air Superiority, Air Combat and Superiority of Moral, Importance of Production and Reserves, Chapter III - Offence and Defence, Principle of Concentration, Principle of Surprise, Principle of Economy of Force, Maintenance of the Object, Diversions, Chapter IV – The Principal Objective of Air Forces, Introductory to Combined Operations, Co-operation, Chapter V - The Influence of Air Power on Sea Warfare, Chapter VI - The Influence of Air Power on Land Warfare and finally Chapter VII – Conclusions.
5 Squadron Leader, Basic Principles of Air Warfare, (Aldershot, Gale & Polden, 1927) p 55.
6 And a major factor in the planning of operations – which of course Burge was well aware of from his time on the IF. This would also of course come to be a driving factor in the operations of Bomber Command during the Second World War.
7 Squadron Leader, p 58.
8 English, "The Raf Staff College and the Evolution of British Strategic Bombing Policy, 1922-1929." p 424.
9 Air Marshal Sir H M Trenchard, "Aspects of Service Aviation", The Army Quarterly, 1921, p 18.
10 LH 11/1927/1
11 The Air Staff, "The War Aim of the Royal Air Force", Confidential Document 64 (Air Staff Memo 43), October 1928.
12 Trenchard Archive, MFC 140/5 (letter to Air Cdre Brooke-Popham from PS to CAS dated 3rd December 1923).

Book Review

Making Sense of War: Strategy for the 21st Century



By Alan Stephens and Nicola Baker

Publisher: Cambridge University Press, Cambridge

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Reviewed by Gp Capt Neville Parton

Books that try to cover the strategic level of warfare are few and far between, in large part because of the intrinsic difficulty in adequately covering a field which is immense in its outlook, and so a new title in this area always generates interest. And that interest is increased when the book originates outside the normal US/UK 'suspects' associated with strategic studies, as this particular volume does, having been produced by 2 Australian academics from the University of New South Wales, Australia Defence Force Academy.

Consisting of 11 chapters, with the majority of these having produced by the authors on an individual basis (only the introduction and final chapter were co-written), it covers what strategy is, how it has been thought of in the past, and how it is approached now, before moving to reflect on some more general considerations regarding the nature of war itself, and in particular those factors that affect the use of force by the military in the 21st century.

From an air power perspective there are a few surprising statements – particularly when they come from the official historian of the RAAF. For instance is it perhaps unexpected to find out that armies have apparently won control of the air, which is alleged to happened in France in 1944 when allied troops captured Luftwaffe airfields. Whilst it is true that the V1 and V2 threat was only lifted when the allied armies overran the areas from which these were launched, real control of the air had already been won before D-Day; in fact the invasion could never have taken place if control of the air had not already been established – what is certainly a fact is that the allied armies could not advance fast enough to provide enough airfields for their own aircraft, and did not take any Luftwaffe airfields until at

least a month after the landings. And coming forwards in time, whilst the importance of Operations Northern and Southern Watch in terms of the coercive use of air power is correctly identified, the details are incorrect – there were in fact 2 no-fly (and later no-movement) zones – one above the 36th parallel (policed from air bases in Turkey) and one below the 32nd parallel (policed mostly from air bases in Saudi Arabia and Bahrain, with a small amount of carrier-borne support). Perhaps a more general criticism is that whilst the strategic level of war is well covered – not surprisingly given the title – and the links (and differences) between the tactical and strategic levels of war are well drawn out, there is effectively no mention of the operational level of war at all. Bearing in mind that this is the point at which strategic and grand strategic aims are turned into campaign plans, and where the tactical level of war is directed, this is a serious limitation. There is also little mention of the way in which strategic level theory, doctrine and strategy interact, and in particular the impact that doctrine can have on the way in which military power s able to be applied – the recent conflict between Israel and Hisbollah in the Lebanon is certainly a good example of this.

Nevertheless, the way in which historical examples are interspersed throughout helps the reader to more readily understand the theoretical concepts which are discussed, and it does cover a tremendous range of strategic thought in a relatively few number of pages. The latter half of the book, which considers more of the context within which warfare is situated, is generally good at introducing a range of topics within this area – ranging from changes in the type of war being fought over last 60 years, through concepts of legitimacy and legality, differences between 'hard' and 'soft' power, and the particularly troubled area of peace-making. What is perhaps unexpected is that the chapter dealing with the controlling of war focusses almost exclusively on the US experience, in terms of considering the balance of power between military and civilian leadership in a number of conflicts from Korea through to Iraq in 2003. Whilst America is clearly a very important nation in terms of considering this particular topic, it would have been useful to see this considered from the perspective of some other international players, and in particular non-Western nations.

The final chapter certainly provides a very useful resume of both recent and current trends in strategic thinking around the world, although mostly from a western perspective, but it does perhaps lean a little towards the current trend to assume an 'end of strategy' – at least in terms of an end to conventional warfare. Whilst this is an area of some contention, it is worth remembering that 'small wars' have a long history, so the current emphasis on counter-insurgency is not particularly new – although it is clear that the environment within which operations are carried out has changed – but as various resources (land, water and energy immediately spring to mind) come under severe strain over the next few decades, it is perhaps unwise to assume that conventional warfare is dead just yet.

In summary, whilst this book does suffer from some shortcomings – such

as the lack of discussion over the linkage between the strategic and operational levels of war, and over-reliance on American experience – it does cover a huge range of material in a very readable fashion. With a wealth of historical references (and ignoring a few minor anomalies) it is certainly ideal as either an introduction to the subject of 'strategy', a provider of material for thought or discussion, or even just a useful reference book to strategic thought and practise down the ages. For the price it certainly represents good value.

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