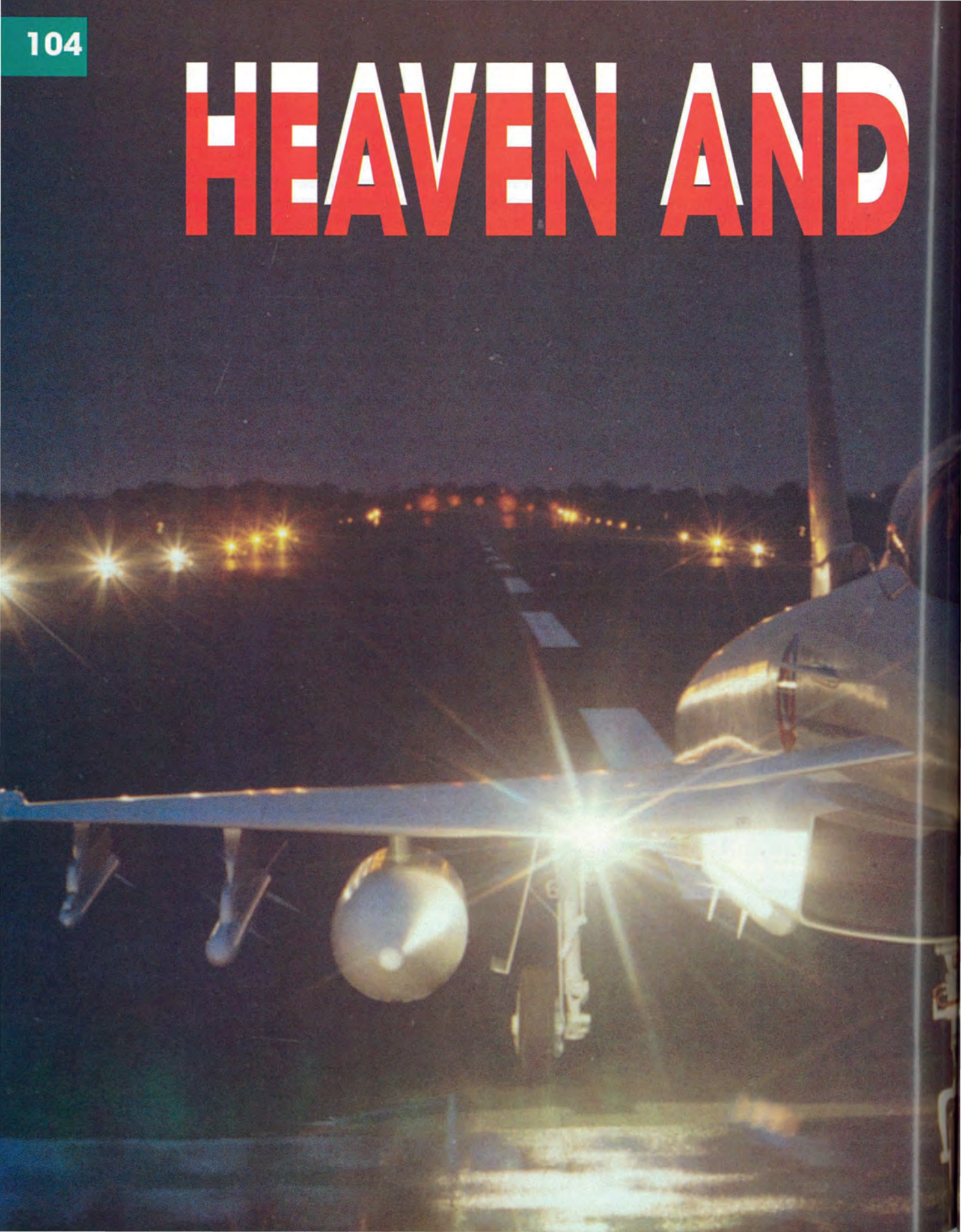
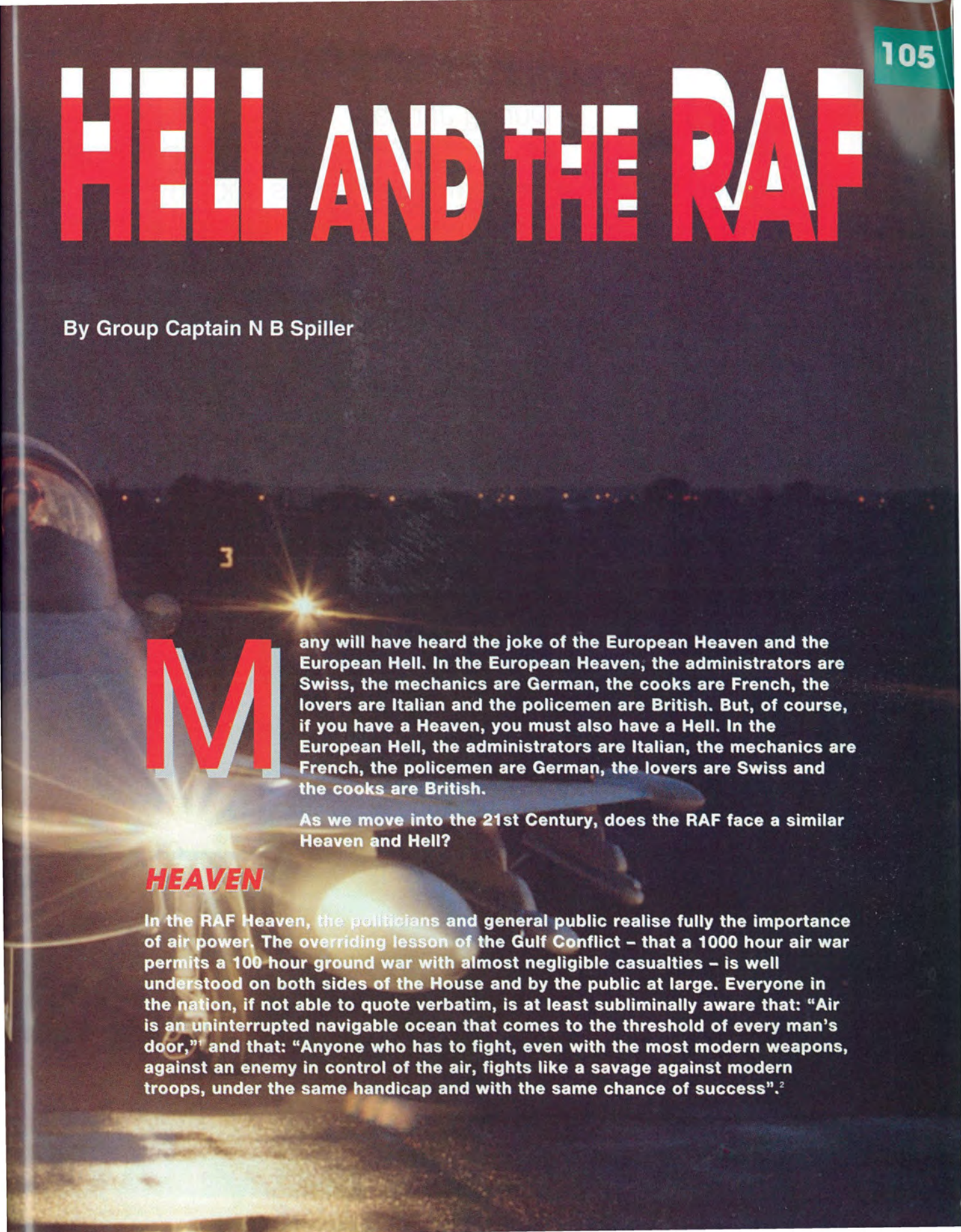
HEAVEN AND



HELL AND THE RAF

By Group Captain N B Spiller



Many will have heard the joke of the European Heaven and the European Hell. In the European Heaven, the administrators are Swiss, the mechanics are German, the cooks are French, the lovers are Italian and the policemen are British. But, of course, if you have a Heaven, you must also have a Hell. In the European Hell, the administrators are Italian, the mechanics are French, the policemen are German, the lovers are Swiss and the cooks are British.

As we move into the 21st Century, does the RAF face a similar Heaven and Hell?

HEAVEN

In the RAF Heaven, the politicians and general public realise fully the importance of air power. The overriding lesson of the Gulf Conflict – that a 1000 hour air war permits a 100 hour ground war with almost negligible casualties – is well understood on both sides of the House and by the public at large. Everyone in the nation, if not able to quote verbatim, is at least subliminally aware that: "Air is an uninterrupted navigable ocean that comes to the threshold of every man's door,"[1] and that: "Anyone who has to fight, even with the most modern weapons, against an enemy in control of the air, fights like a savage against modern troops, under the same handicap and with the same chance of success".[2]

During January 1998, a second Harrier GR7 squadron was prepared for carrier operations and, in Februrary, took over the commitment aboard HMS Illustrious; this force conducted operations over Iraq

Moreover, a well-informed public is acutely conscious of the tremendous commitment to operations that the RAF has been required to make during the last decade of the 20th Century. The SDR – with its emphasis on flexible forces, available to strengthen the United Nations in peace support and humanitarian operations often over considerable distances and, if deterrence fails, to have the combat power, skill and capabilities to win – almost shouts for the unique abilities that only air power brings to the table.

Thus, while the SDR rightly identified overstretch in the British Army and instigated the formation of a sixth deployable Army brigade, together with additional logistic and medical units, in the RAF Heaven the Country realises that it had not fully foreseen the almost continuous call on Air that would occur to meet our wider defence needs.

Fig 1 gives a flavour of the RAF's operational tasking for 1998.

Fig 1 – RAF Operations – 1998

Operation TATSFIELD	**– Indonesia**
Operation GARRICK	**– Eritrea/Ethiopia**
Operation SWANSTON	**– Albania**
Operation LADBROOK	**– Congo**
Operation JURAL	**– Middle East**
Operation WARDEN	**– Middle East**
Operation BOLTON	**– Middle East**
Operation ARGENTIC	**– Middle East**
Operation PALATINE	**– Balkans**
Operation BALMAKEERY ECHO	**– Balkans**
Operation HOUSE	**– Balkans**
Operation DELIBERATE GUARD	**– Balkans**
Operation DELIBERATE FORGE	**– Balkans**
Operation ENGADINE	**– Kosovo**
Operation RADOME	**– Kosovo**
Operation SOMERSET	**– Kosovo**
Operation MAINSAIL	**– Belize**
Operation SPARTIC	**– Sierra Leone**

A closer look at the RAF's operational tasking for 1998 shows the almost total commitment of our higher-readiness JRRF declared forces. The year started with a squadron of Harrier GR7 and associated logistic support aboard HMS Invincible as part of Operation BOLTON. During January 1998, a second Harrier GR7 squadron was prepared for carrier operations and, in February, took over the commitment aboard HMS Illustrious; this force conducted operations over Iraq.

Royal Air Force photo reconnaissance Canberra from 39 Squadron Marham

...over Bosnia and Kosovo, Canberra PR9, E-3D and Nimrods were deployed regularly to provide airborne early warning, strategic reconnaissance and treaty verification. A Tristar provided air-to-air refuelling for the NATO force through much of the year

The primary offensive capability for Operation BOLTON was always intended to be a Tornado GR1 force in Kuwait. This force, together with Royal Engineers support, a Tactical Survive to Operate HQ, a RAF Regiment Field Squadron and logistics support, deployed in February 1998. The force achieved initial operating capability within 4 days and full capability within 7 days. Alongside the Tornado GR1 deployment, air-to-air refuelling assets at Bahrain were reinforced and, following the withdrawal of HMS Illustrious in April, a further 4 Tornado GR1 were deployed to Ali Al Salem to maintain offensive capability in theatre. These forces were all in addition to our long-standing Tornado GR1 deployments to Saudi Arabia and Turkey as part of Operations JURAL and WARDEN. The year finished with Tornado GR1 aircraft conducting bombing missions over Iraq as part of Operation DESERT FOX.

In the European theatre the operational pace was similarly challenging. The year started with a RAF Regiment Field Squadron and Chinook aircraft deployed in Bosnia. In June, Jaguars were deployed to Gioia del Colle in Italy in response to the Kosovo crisis, arriving just 24 hours after the order to deploy. Subsequently, the Jaguars were replaced in theatre by Harrier GR7, allowing the Jaguars, in turn, to ease the load on the Tornado GR1 force by taking over the Operation WARDEN commitment in Turkey. Meanwhile, over Bosnia and Kosovo, Canberra PR9, E-3D and Nimrods were deployed regularly to provide airborne early warning, strategic reconnaissance and treaty verification. A Tristar provided air-to-air refuelling for the NATO force through much of the year.

Further multifarious commitments during 1998 included a force of 7 Hercules to Central Africa, 2 Hercules and a Tristar for non-combatant evacuation from Sierra Leone, Hercules to provide humanitarian aid for Belize following hurricane damage, and Hercules for evacuations from Eritrea and Albania. Typically, to meet the daily crisis management tasks, the air transport fleet flew some 26 sorties per day.

In all, throughout 1998, the RAF generated for operations or tactical evaluation the majority of the declared higher readiness JRRF commitment. As a result, there was little spare capacity for more than essential operational training and few opportunities to ease the load on hard-pressed front-line squadrons. Moreover, as all are well aware, 1999 brought no respite.

Already, 1999 has seen the RAF conducting operations on a scale not seen since the Gulf Conflict. From the start of offensive operations over Kosovo on 24 March 1999 to the end of May 1999, the RAF flew on Operation ENGADINE:

Harrier GR7	– 690 operational sorties
Tornado GR1	– 142 operational sorties
E-3D	– 140 operational sorties
Nimrod	– 40 operational sorties
Tristar	– 190 operational sorties
VC-10	– 61 operational sorties

These sorties saw the delivery, often against significant air defences, of 185 slick 1000 lb bombs, 452 RBL755, 218 Paveway II, 16 Paveway III and 2 ALARM missiles. Moreover, Kosovo was not our only operational theatre. 1999 saw the RAF also conducting operations in North and South Iraq. In the first 5 months of 1999 on Operation BOLTON, RAF Tornado GR1 crews flew over 1100 operational sorties and Tornado F3 crews over 250 operational sorties. Weapons expended in retaliation to Iraqi aggression included 74 Paveway II and 5 Paveway III. For the first time since the Second World War, the RAF found itself engaged at the same time on offensive missions in 2 continents. In the RAF Heaven, a grateful nation is aware of the real capability, bravery and sacrifices being made by RAF personnel and the strain on our equipment programme. As a result, parliament willingly pledges the finances for further men and materiel to enable us to achieve the task in the future.

That is RAF Heaven! But, of course, if there is a RAF Heaven, there is also a RAF Hell.

HELL

In the RAF Hell, the general public are less aware of, and grateful for, the RAF's dedication in meeting operational tasking, with some questioning our bombing of Iraq, and others dubious at the apparent lack of a clear objective in our policy for the region. Similar concerns are expressed at our presence over Kosovo. There is a general clamour for a reduction in low flying, demands for less night training and calls for further restrictions on our airspace – all of which reduce our ability to prepare for operations.

More critically, the lack of public focus on the RAF, and the media concentration on increased funding for Education and Health, mean that the MOD staffs are incapable of meeting fully the financial costs of our complex technical requirements to remain credible in the air power arena,[3] or of easing adequately the strain under which the RAF is operating.

In 1941, the FW 190 was able to dominate the skies over Europe until we hurried into service the Spitfire IX

Air, more than any other fighting medium, is dominated by technology. In 1941, the FW 190 was able to dominate the skies over Europe until we hurried into service the Spitfire IX. Only then could we again take the air war successfully to the enemy. Technology today is developing at a significant rate and in a variety of new areas. It will continue to dominate the air battle for the foreseeable future and, if we are not to sustain unacceptable losses in peace support operations, we will need to maintain the technological edge over potential adversaries.

This may not be easy. Many, so-called, third world air forces can now boast a squadron or more of Mig 29 (or equivalent) and an equally capable surface-to-air missile threat. And the desperate need for hard currency of some ex-Soviet Union nations means that such weapon systems will continue to be available at competitive prices in the future.

For the RAF, Jaguar entered service in the 1970s, Tornado in the 1980s and only the Harrier GR7 can claim a 1990s heritage. This is not to decry these aircraft – they have had, or are undergoing, significant upgrades and continue to undertake successfully our operational commitments – but many are not in the first flush of youth. In most peace support operations we would expect to operate alongside US forces who are prepared to spend big money on force protection. In the Gulf Conflict, the US forces flew over 4,000 SEAD missions alone, launching over 1950 HARM missiles.[4]

To maintain their technological edge, US forces are moving increasingly to stealth and digital connectivity in the battle-space. If we are to play our full part in future conflicts and not be relegated to the second echelon, we will need to field technology that is at least compatible with US procedures. The Tornado GR1 force, in the first 4 days of the Gulf Conflict suffered a loss rate of approximately 4.5 percent – against a coalition average loss rate over the whole conflict of about 0.055 percent.[5]

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The technological leap to keep the RAF competitive for the first part of the next century is Eurofighter. The auspices are good and Eurofighter looks to be a world-beater but, in the RAF Hell, this may not be the case. We should not quickly forget the Supermarine Swift that was to enter service ahead of the Hawker Hunter but because of flight control, flap/slat and engine problems had to be withdrawn only to re-emerge 4 years later as a low-level recce aircraft.

Thirty years ago, the Phantom entered service in 1968, the Harrier in 1969 and the Jaguar in 1973. We had, if you like, 3 strings to our bow. It is not sensible to suggest that we should be introducing intentionally a mixed fleet but, in future, we will have, in effect, only one string to our bow. The reality is that, for the RAF, Eurofighter has to work – and remain operationally competent for a significant period.

The Tornado loss rate was, at least in part, the result of being routinely among the last formations over the more heavily defended targets. In the Gulf Conflict, there were sound operational reasons for accepting such risks but in the future, if we do not have the appropriate weapon systems to go to war, such loss rates (or the alternative of relegation to support operations) may not be a pill that the Country would wish to swallow.

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It is sometimes said that an army equips the man and an air force mans the equipment. As ever, such sayings have an element of truth. Certainly, equipment, the aircraft that we operate, are fundamental to our business, but they are not the only vital ingredient. People, competent and motivated people, remain critical to the success of any air force. Much work is in hand to ensure that the RAF has adequate trained and committed personnel for the future. Some areas provide greater challenges than others. GD sustainability and our ability to fill cockpits continues as one of the greatest challenges.

The Joint Helicopter Force will see the move of our tactical helicopters to a joint organisation under Land Command

In the RAF Hell, we are unable to gear up the training machine to produce sufficient new pilots, and the pull from the airlines continues to take away many of our more experienced and capable front-line aircrew. The result is empty posts, first on the ground then in the cockpits. Empty front-line cockpits would create their own special tensions, particularly if the operational tempo remain stimulating. Closing squadrons as a possible method of addressing a pilot shortfall would mean a still smaller front-line, reducing further our longer-term ability to sustain the GD cadre – thus, perpetuating the downward spiral in capability – and the opportunity for regeneration.

Chinook HC2 from 27 Squadron, RAF Odiham

There are no quick or easy solutions to pilot manning difficulties and it is small comfort to know that we are not alone in the predicament. The RAAF reportedly has only 53 pilots to man its 71 F18 Hornets.[6] There is an equal European dimension. The RNoAF, according to recent reports, can man only 55 percent of their fighter aircraft and 2 years ago it was reported[7] that the RDAF could muster only 14 F-16 pilots at Aalborg to fill the 36 pilot appointments. Training and retaining sufficient front-line aircrew is a real problem for many air forces and one that, in our RAF Hell, may come to haunt us.

In the RAF Hell, to add to the inferno of equipment and personnel difficulties may be included the final threat of the dissolution of a proportion of the force. SDR and the sensible drive for greater jointery has a particular poignancy for the RAF as our operating medium permeates irreconcilably and uniquely the environs of our sister Services. Warships may operate effectively without Army support and tanks without Naval support, but neither may operate freely without adequate air cover.

It is not surprising that the RAF is making significant contributions to 2 of the major initiatives for operational jointery identified in the SDR – the Joint Helicopter Force and Joint Force 2000. The Joint Helicopter Force will see the move of our tactical helicopters to a joint organisation under Land Command. Joint Force 2000 will see our Harrier GR7, Nimrod and SAR helicopters amalgamate with the Royal Navy Sea Harriers to form a combined JRRF capability optimised for maritime operations; the Force will be commanded by a rear admiral.

In RAF Hell lies the ultimate spectre of the RAF not surviving to serve for a second 100 years

While the move to greater jointery is to be applauded, there remains the risk that in the RAF Hell, over time, the RAF's tactical helicopters will become, de facto, Land assets and, possibly, our maritime forces will be transferred to the Royal Navy. This is not mere whimsical fabrication. The way in which Strike Command provides combat capability to PJHQ has already demonstrated the need for direct lines of tasking and authority. As tactical helicopters are employed on operations, this lesson may be relearnt with the result that, to improve operational response, all tactical helicopters, and their support modules, will be required to transfer permanently and completely to Land Command.

Perhaps less likely, but possible in a RAF Hell where maritime operations are dominant, would be a similar transfer of Joint Force 2000 assets to the Royal Navy. Taken together – the transfer of all RAF helicopters, the Harrier Force and the maritime Nimrod Force to the other Services, the disbandment of Logistics Command, and contractorisation and Private Finance Initiatives removing assets and capabilities from the uniformed Service – and suddenly the size and viability of the RAF itself is brought into question.

In the depths of RAF Hell is the final disaggregation of our remaining assets and the disbandment of the RAF as a single-Service. In RAF Hell lies the ultimate spectre of the RAF not surviving to serve for a second 100 years.

The Royal Air Force
1918-2018
Rest in Peace

Inadequate equipment, undermanned and constructive dissolution – taken together would be to plumb the depths of RAF Hell!

REALITY

Reality for the future will almost certainly lie somewhere between Heaven and Hell. It is inconceivable that the RAF would be fortunate enough to experience RAF Heaven but, equally, RAF Hell is probably too stark to contemplate.

The RAF has always been a technically innovative force, looking to the future rather than dwelling in the past. And there is a challenging and exciting future to be explored. In the 1930s, the British Army and the RAF both put out contracts for aircraft detection systems. The Army specified a range of 30 miles; the RAF required the greatest range possible. The result was that the Army received a development of their sound detection system – the RAF introduced radar to the air battle and the World.

As we move into the 21st Century, we should search for similar innovation. Space and cyberspace are mere extensions of the air medium, and the rightful domain of air forces. Perhaps they also provide scope for development beyond the limits that presently restrict us. Precision munitions may not always be the preferred weapon of the next century, particularly if a competent computer operator sitting in London can achieve the same results without risking British lives or equipment.

Our challenge for the future, whatever the difficulties, is to grasp these ambitious opportunities and make them our own. Air, Space and Cyberspace – our fighting medium for the next century?

"Time brings all things to pass".[8]

NOTES

1 Cayley.

2 Rommel.

3 According to an article in Jane's Defence Weekly, Norway's CDS (an army officer) suggested delaying the procurement of a replacement for the F-5 from the planned 1999 timescale. His recommendation was that for the next 4 years (1999/2002) procurement priority should be given to the Army, then from 2003 to 2006 priority should be given to the Navy's requirement for new frigates, and only in 2007 should money be made available for replacement combat aircraft.

4 Ken Freeman, RUSI 21 Jan 99.

5 Ibid.

6 Australian Daily Telegraph, 9 Dec 98.

7 Jane's Defence Weekly

8 Aeschylus.