

Air Power Review

First Gulf War 25th Anniversary - Special Edition

Summer 2016

Part 1

Introduction: Britain and the 1991 Gulf War

The Institute of Contemporary British History's
Transcript of their Witness Seminar on the
1991 Gulf War

Part 2

Viewpoints from the Cockpit - Reflections of
Tornado GR1 Aircrew

Part 3

Selection of Declassified Tornado GR1 and
Jaguar GR1 Mission Reports (MISREPs)

Part 4

Articles Covering the Period from the First Gulf
War to Op IRAQI FREEDOM, by Dr David Jordan,
Dr Peter Gray, Dr Sebastian Ritchie and
Sqn Ldrs Andrew Green and Mark Tobin

Part 5

Book Reviews of 10 Essential Reading
First Gulf War Titles

**A Peer Review Journal by the
RAF Centre for Air Power Studies
in Collaboration with the Institute
of Contemporary British History**

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flagship publication
of the Royal Air Force

Royal Air Force Air Power Review

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Jaguar and Tornado fighter-bombers in the distinctive sand camouflage applied to aircraft taking part in Operation GRANBY.



RAF Tornado GR1s of the Tabuk Wing in Northern Saudi Arabia.



Groundcrew prepare a Buccaneer of 208 Squadron for another mission at Muharraq.

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Two Tornado F.3s patrolling the Saudi/Kuwait border during Operation GRANBY.



A Victor of 55 Squadron refuelling a Tornado GR.1 and Buccaneer S.2 on their way to a target.

5

Foreword

Group Captain Paul Wilkins (DDS) RAF

9

Britain and the Gulf War - Chronology

30

Introduction: Britain and the 1991 Gulf War

Dr Michael Kandiah, Dr David Jordan and

Dr Kate Utting

37

Britain and the 1991 Gulf War Witness Seminar

Session 1: 11:30-12:45: Origins of the Conflict up to Desert Shield

57

Britain and the 1991 Gulf War Witness Seminar

Session 2: 14:00-15:30: Discussion of the Prosecution of the Conflict

80

Britain and the 1991 Gulf War Witness Seminar

Session 3: 16:00-17:30: Discussion of the Aftermath of the Conflict

100

Interview of Lord King of Bridgwater

With Dr Kate Utting and Dr Michael Kandiah

121

Interview of Lord Wakeham of Maldon

With Dr Kate Utting and Dr Michael Kandiah

130

Viewpoints

Tornado GR1 1,000lb GPB Low-Level Loft Delivery (17 Jan 1991)

Wing Commander Mike Toft

134

Tornado GR1 JP233 Delivery (17 Jan 1991)

Wing Commander Andy Walters

141

Selected Tornado and Jaguar Mission Reports for the Period 16th January to 23rd February 1991

188

The Royal Air Force and the First Gulf War, 1990-91: A Case Study in the Identification and Implementation of Air Power Lessons

Dr Sebastian Ritchie

206

**Operation GRANBY:
Maritime Air Reconnaissance**
Dr Sebastian Ritchie

228

**Evolution, not Revolution? Some Thoughts on
Desert Storm and the RMA Debate**
Squadron Leader Andrew Green

238

**A War Misunderstood? Some Brief Reflections
on Britain's air war in the Gulf 1990-91**
Dr David Jordan

248

**RAF Air Policing over Iraq – Uses and Abuses
of History**
Air Commodore (Retd) Dr Peter Gray

256

**The RAF in Operation TELIC: Offensive Air
Power, March-April 2003**
Dr Sebastian Ritchie

271

**Operation IRAQI FREEDOM Air Campaign:
A Tactical Military Success, or a Strategic
Information Failure?**
Squadron Leader Mark Tobin

290

Book Reviews
Introduction by Wing Commander Chris Hunter

292

**Arab Storm: Politics and Diplomacy Behind the
Gulf War**
Reviewed by Squadron Leader Angharad Boyson

295

Desert Warrior: A Personal View of the Gulf War
Reviewed by Group Captain (Retd) Ian Shields

297

**The Generals' War: The Inside Story of the First
Gulf War**
Reviewed by Wing Commander Mal Craghill

300

War with Iraq: Critical Lessons
Reviewed by Flight Lieutenant
Alexander McKenzie

303

**Heart of the Storm: The Genesis of the Air
Campaign Against Iraq**
Reviewed by Group Captain John Alexander

306

Strategic Air Power in Desert Storm
Reviewed by The Reverend Dr (Squadron Leader)
David Richardson

309

**On Target: Organising and Executing the
Strategic Air Campaign Against Iraq**
Reviewed by Group Captain Phil Lester

311

The Iraq Wars and America's Military Revolution
Reviewed by Group Captain Shaun Harvey

314

**Storm Command: A Personal Account of the
Gulf War**
Reviewed by Flying Officer Wayne Lovejoy

317

**Thunder & Lightning – The RAF in the Gulf:
Personal Experiences of War**
Reviewed by Squadron Leader Nigel Jones



A Hercules at a remote desert airstrip.

Foreword



By Group Captain Paul Wilkins MA RAF
Director of Defence Studies (RAF)

A line has been drawn in the sand... Withdraw from Kuwait unconditionally and immediately, or face the terrible consequences' was the ultimatum laid down by the US President, George HW Bush, in late 1990. But by early January 1991, Saddam Hussein, the leader of Iraq whose military forces were occupying Kuwait, was promising the gathered US-led coalition that it would soon face 'the mother of all battles'. Just eleven days later, on the morning of 17th January 1991, John Major, the new British Prime Minister who had replaced Margaret Thatcher after her deposition by her own party only 7 weeks earlier, broadcast to the British public: 'Since before dawn today, Britain's forces have been in action in the Gulf. Their skill and courage have already been tested', going on to say: 'I will not offer you rash promises about how quickly this can be done. The operation on which we have embarked involves danger and sacrifice'. The First Gulf War was underway¹.

Operation GRANBY, the UK's codename for its contribution to the coalition effort, deployed 53,462 UK armed forces personnel and all of their fighting equipment to the Middle East region. Only two years after the fall of the Berlin Wall and its symbolic end to the Cold War, the UK's armed forces were leaving behind their NATO-oriented hardened largely static facilities in Britain and West Germany to fight mobile expeditionary warfare in the open desert. For the Royal Air Force, the 157 aircraft and over 7,000 airmen and women² operating from Bahrain, Cyprus, Oman and Saudi Arabia represented its largest single operational deployment since the Suez Crisis of 1956. And therefore, during its 25th anniversary year, a moment which has received little fanfare, it is entirely appropriate for the Royal Air Force's *Air Power Review* to mark the occasion in this First Gulf War-themed special edition.

In a first of its kind for *Air Power Review*, the Royal Air Force Centre for Air Power Studies (RAF CAPS) has joined in formal collaboration with the Institute for Contemporary British History (ICBH), part of the Faculty of Social Science and Public Policy at King's College London (KCL). The ICBH is the UK's leading centre for research and study into the contemporary history of the United Kingdom. It aims to foster co-operation with other academic and cultural institutions, and raise the profile of contemporary history generally through its activities. It is one facet of the ICBH's work, its Witness Seminar Programme, that this special edition draws upon for our

collaboration. These seminars, best described as group interviews, are conducted and recorded in front of an audience of expert academics and other interested individuals, from which an agreed transcript is published for the use of scholars and practitioners. Each one contributes to an unparalleled oral history archive.

This First Gulf War edition comprises five parts; a sequential journey through them will comprehensively lead the reader to examine the war from many angles and, hopefully, leave them eager to discover more. Part 1 is the transcript of the ICBH Witness Seminar - the centrepiece of this edition. In a change to the normal running order for *Air Power Review*, the viewpoints in Part 2 provide two very personal accounts from aircrew who flew attack sorties in the opening waves of the war. These then contrast sharply with the more official language in the selection of recently declassified Tornado and Jaguar Mission Reports, or MISREPs, that follow in Part 3. In Part 4, seven articles examine not only various aspects of the First Gulf War but also its no-fly zone (NFZ) aftermath up to and including the Second Gulf War in 2003. The book reviews in Part 5 that complete this edition identify the books which provide variety and focus for further reading. The edition is therefore arranged to take a reader carefully through the First Gulf War and beyond but each Part can, of course, be tackled out of sequence without loss of meaning to the reader. Our intention is that this edition will become the default reference for UK airmen, military scholars and academics seeking greater understanding on this significant period in the UK's history.

The ICBH conducted its First Gulf War witness seminar in March 2011 and subsequently followed this up with two specific interviews out with the Seminar but whose output was important to it. With the exception of the then Prime Minister John Major, it brought together almost every senior British player in the 1991 War. The witnesses ranged from the UK Ambassadors to Kuwait, Saudi Arabia and the Permanent Representative to the United Nations through to the Secretary of State for Defence, and from the Commander of British Forces Middle East to the senior deployed commanders of all three Services. The determination with which each witness tells their story 'on the record' is absolutely clear. Collectively, they have provided a wonderful account of the UK's thinking in the months leading up to and during the war. In particular, the transcript offers genuine insight on the subtlety and nuance of UK thinking at that time which is so often missing from much of the US-centric literature. In short, it is a text that once started is difficult to put down. Through the RAF CAPS and ICBH collaboration it is published first here in *Air Power Review*.

The two viewpoints that immediately follow in Part 2 remind us that war is fought between humans; they provide the (sometimes) harsh tactical reality of what the senior figures were discussing in Part 1. In the first of these, the then Flight Lieutenant Mike Toft, a Tornado GR1 navigator, provides a highly personal account of his first sortie on the opening night of the War. Tasked with a night, low-level, loft attack against Ar Rumaylah airfield in Iraq, he uses humour, candour and seriousness in equal measure to superbly tell a story that contains its difficult moments. Flight Lieutenant Andy Walters, a Tornado GR1 pilot provides our second account³.

He was tasked to deliver a JP233 runway denial weapon in a night, low-level attack against Al Taqaddum airfield in Iraq, also on the opening night. This account provides an interesting juxtaposition of the impact of procurement decisions taken many years before and the quality of Royal Air Force training which allowed them to be overcome. Together, these two airmen take us into their cockpits and provide a glimpse through the fog and friction of war to understand what it was like to be there.

Part 3 offers a de-classified selection of Tornado and Jaguar MISREPs which are reproduced as verbatim facsimiles from the primary source material due to the poor quality of the scanned originals; they too are published for the first time in this edition. Introduced by Group Captain Paul Wilkins, the MISREPs tell their own stories, not only of the obvious mission-specific detail but the underlying context in which they were flown is also detectable. At times, different emotions such as apprehension, frustration and justifiable satisfaction of a job well-done emerge through the pores of the technical detail. Ultimately, both aircraft types experienced significantly different wars and these MISREPs highlight that through the language they use. The narrative is fundamentally one of professionalism but also of rapid adaptation in war, something the Royal Air Force has been doing successfully since 1918.

Seven articles make up Part 4 of this edition; the first four focus solely on the First Gulf War with the next 3 covering the air policing period that followed and the Second Gulf War in 2003. In *The RAF and the First Gulf War, 1990-91: A Case Study in the Identification and Implementation of Air Power Lessons*, Dr Seb Ritchie of the Air Historical Branch (RAF) considers the significance of the First Gulf War to the RAF and examines what it did about the lessons it identified. Dr Ritchie also provides our second article, *Operation GRANBY: Maritime Air Reconnaissance* which takes an in-depth look at one of the lesser known stories of this War - the contribution of the RAF's Nimrod MR2s to Air-Maritime Integration activities. In *Evolution, Not Revolution? Some Thoughts on DESERT STORM⁴ and its Place within the RMA Debate*, Squadron Leader Andrew Green evaluates the popular discourse that military operations in the First Gulf War represented a revolution in military affairs, or RMA, where new technologies such as stealth and precision guided munitions were considered by some to have fundamentally redefined how future warfare would be conducted. Dr David Jordan of the Defence Studies Department of King's College London provides our fourth article. In *A War Misunderstood? Some Brief Reflections on Britain's Air War in the Gulf 1990-91*, he challenges aspects of the contemporary narrative and asks if twenty-five years on, we really understand the meaning of the events that unfolded.

In *RAF Air Policing Over Iraq - Uses and Abuses of History*, Air Commodore (Retd) Dr Peter Gray reviews our examination of history and finds it wanting when he considers the matter through the no-fly zones implemented over Northern and Southern Iraq after the termination of the First Gulf War, and which were maintained right up to the start of the Second in 2003. And it is Operation TELIC, the codename for the UK's contribution to the Second Gulf War, where Dr Seb Ritchie returns in *The RAF in Operation TELIC: Offensive Air Power, March-April 2003* for what is an unprecedented third article in this edition of *Air Power Review*. Drawing on still classified

material, Dr Ritchie provides a compelling account of the RAF's involvement in the action and identifies lessons that go well beyond those of Air-Land Integration. Our final article is from Squadron Leader Mark Tobin. *Operation IRAQI FREEDOM Air Campaign: A Tactical Military Success, or a Strategic Information Failure?*⁵ argues that the effectiveness of air power lies as much in the perception of its achievements as in the actual achievements themselves, and that the complexity of air operations in the 21st Century renders their assessment on absolute notions of success or failure as overly simplistic. Collectively, then, these seven articles in Part 4 offer a broad and deep analysis of RAF operations in the Middle East between 1990 and 2003.

In Part 5, our final part of this special edition, Wing Commander Chris Hunter introduces us to a selection of ten books that offer the military scholar, practitioner and academic the potential of further insight on the First Gulf War. With subjects spanning all three levels of warfare and authors offering US, British and Arab perspectives, there really is something here for everyone. Reviews for each book have been provided by the Chief of the Air Staff's Fellows, retired senior officers and academics.

On the 6th March 1991, John Major, the British Prime Minister in addressing RAF personnel assembled at Dhahran air base in Saudi Arabia following the termination of the First Gulf War, said: 'it was a remarkable military operation, one of the best there has ever been and it was executed as well as it could have been and you certainly played a front line part in it.' In 1996, speaking at a Seminar on Air Leadership held at the RAF Museum, Air Chief Marshal Sir Paddy Hine, the Joint Commander of British Forces in the First Gulf War, concluded simply this: 'The [First] Gulf War is sometimes referred to as the 100-hour war, but in reality it was the 1,100-hour air war that enabled the coalition to defeat the World's fourth largest army and sixth largest air force in only six weeks and with the loss of only 240 Allied lives. This war clearly illustrated the tremendous impact that modern air power can have in major conflict.' This special edition of *Air Power Review* allows anyone to develop their own informed judgement on the Air Marshal's assessment. This is Britain's and the Royal Air Force's experience in the First Gulf War.

The Directors of the RAF CAPS would like to thank Dr Michael Kandiah, Director of the ICBH at KCL and Dr Kate Utting, Deputy Dean of the Defence Studies Department at KCL, for their cooperation in the publication of this First Gulf War-themed special edition of *Air Power Review*.

Notes

¹ It is acknowledged that the 1980-88 war between Iraq and Iran is sometimes referred to as the First Gulf War; nonetheless, this edition of *Air Power Review* uses this term to refer to the 1991 Gulf War.

² RAF press release, 'Operation GRANBY – Fact Sheet', 9 May 1991, pp. 2-4 (held at Air Historical Branch (RAF)).

³ Wing Commander Mike Toft is still serving in the regular RAF and Wing Commander Andy Walters now serves in the RAF Reserve.

⁴ Operation DESERT STORM was the codename for US operations in the First Gulf War.

⁵ Operation IRAQI FREEDOM was the codename for US operations in the Second Gulf War.

Britain and the Gulf War - Chronology

1979

16 July – Iraqi President al-Bakr resigned. Saddam Hussein assumed absolute power and executed scores of potential rivals.

27 December – The USSR invaded Afghanistan.

1980

22 September – Iraq attacked Iran.

December – HMS Apollo and HMS Ardent deployed to commence Armilla patrol.

1981

7 June – Israel attacked Iraqi nuclear research centre at Osirak (Operation OPERA).

1982

6 June – Israeli troops entered Lebanon (Operation PEACE FOR GALILEE).

21 August – French peacekeeping forces began arriving in Lebanon as part of tri-nation Multi-National Force (MNF).

24 August – US Marines arrived in Lebanon to join MNF.

26 August – The Italian contingent for MNF arrived.

1983

February – British troops joined peacekeeping force in Beirut.

11 September – As part of Operation PULSATOR, in support of UK peacekeeping effort, two RAF Buccaneers made a show of force over Beirut.

23 October – Suicide bombers attacked US and French barracks, killing 299 troops. The French responded with air strikes in Beqaa Valley.

4 December – US Navy air strikes against Syrian positions in Shouf Mountains. Two US aircraft lost; one crewman killed, another captured (released January 1984).

1984

February – MNF began withdrawal from Lebanon.

1985

January – Israelis began withdrawal from Lebanon into Security Zone.

March – Mikhail Gorbachev became General Secretary of Communist Party of the USSR.

1986

5 April – Bomb in La Belle Disco, Berlin. One US serviceman killed; attack blamed on Libya.

15 April – USA carried out Operation EL DORADO CANYON against targets in Tripoli and Benghazi, Libya, in response to disco bombing.

1987

The First Intifada (until 1993).

20 July – UNSCR 598 called for cease-fire between Iran and Iraq.

1988

16 March – Iraq employed chemical weapons against the Kurdish town of Halabjah. Saddam Hussein blames Iranian forces for the attack.

April – Iraqi forces begin a new offensive in the Iran-Iraq War.

20 August – Iran-Iraq war ceasefire under the terms of UNSCR 598.

December – The Palestinian Liberation Organisation (PLO) accepted UNSCR 242.

1989

May – Egypt took part in Arab League summit at Casablanca for the first time in 10 years.

July – The Cabinet decided to prohibit sale of BAe Hawk to Iraq.

1990

10 March – Farzad Bazoft, an Iranian-born journalist with London's Observer newspaper, accused of spying for Israel on a military installation was convicted and sentenced to death. His companion, Daphne Parish, sentenced to 15 years in prison.

15 March – Farzad Bazoft hanged in Baghdad. HM Ambassador Harold Walker recalled.

March – 'Supergun' parts confiscated at London Heathrow Airport.

2 April – Saddam Hussein threatened to use chemical weapons against Israel.

April – Anglo-American decision not to sell nuclear triggers to Iraq.

May – Ambassador Harold Walker returned to Baghdad to resume dialogue with the Iraqi government with the possibility of a visit by the Secretary of State for Foreign Affairs in 1991.

28 May – Saddam Hussein declared that oil overproduction by Kuwait and UAE represents 'economic warfare' against Iraq.

15 July – Iraq accused Kuwait of stealing oil from Rumaylah oil field near the Iraqi-Kuwaiti border and warned of military action.

17 July – Daphne Parish freed in Iraq. Saddam Hussein addressed Iraqis and claimed Kuwait and the UAE have conspired to cut off Iraq's livelihood.

18 July – Iraqi Foreign Minister Tariq Aziz claimed that Kuwait had stolen US\$2.4 billion worth of Iraqi oil and had built military posts on Iraqi land.

19 July – The Iraqi Ambassador to Washington told by the State Department that the United States continued to support the sovereignty and integrity of the Gulf States.

22 July – Iraq began deploying troops to the Iraqi-Kuwaiti border.

23 July – Egypt offered to mediate the dispute between Iraq and Kuwait. Tom King, the Secretary of State for Defence, announced 'Options for Change'.

24 July – US warships on alert in the Gulf; joint military exercise with UAE. Iraq amassed 30,000 troops on Iraqi border. Egypt's President Mubarak began his mediation mission with visits to Iraq, Kuwait and Saudi Arabia.

25 July – Saddam Hussein summoned April Glaspie, the American Ambassador to Baghdad, to a meeting 'to hold comprehensive political discussions'.

26 July – Egypt proposed a peace deal and Kuwait agreed compensation.

27 July – 100,000 Iraqi troops on the Kuwait border.

28 July – OPEC agreement on oil price rise.

29 July – King Hussein of Jordan attempted to save peace talks.

31 July – Peace talks between Iraq and Kuwait in Jeddah; approximately 140,000 Iraqi troops on Kuwait's border. Kuwait rejected Iraq's claims to the islands of Bubiyan and Warbah.

1 August – Iraq broke off peace talks.

2 August – Iraq began invasion of Kuwait at 0200 hours local (2300 1 August GMT). UNSCR 660 condemned the invasion and demanded Iraq's withdrawal. Prime Minister Margaret Thatcher was in Washington on day of invasion. The USA, UK and France froze Iraqi assets. The USSR halted weapons sales. US Secretary of State James Baker flew to Moscow. Oil prices rose by 15 per cent.

3 August – The USA despatched a naval force to the Gulf. The UN demanded Iraqi withdrawal. The Arab League condemned the invasion but 7 members abstained. Saudi Arabia threatened as Iraqi troops are moved to the Kuwaiti-Saudi border. A meeting of the Cabinet's Overseas and Defence Committee was chaired by Foreign Secretary Douglas Hurd in Mrs Thatcher's absence,

which endorsed full economic sanctions, but debated whether or not Saudi Arabia or Turkey would be prepared to accept Western support.

4 August – The European Community banned imports of Iraqi oil and froze Kuwait's assets.

5 August – Mrs Thatcher's speech in Aspen Institute in Colorado:

Iraq's invasion of Kuwait defies every principle for which the United Nations stands. If we let it succeed, no small country can ever feel safe again. The law of the jungle would take over from the rule of law. The United Nations must assert its authority and apply a total economic embargo unless Iraq withdraws without delay. The United States and Europe both support this. But to be fully effective it will need the collective support of all the United Nations' members. They must stand up and be counted because a vital principle is at stake: an aggressor must never be allowed to get his way'.

6 August – The UN imposed mandatory comprehensive sanctions on Iraq. UNSCR 661 demanded an 'immediate and unconditional' withdrawal of Iraqi troops and ordered a trade boycott on Iraq, except for medicine and in humanitarian circumstances food, in a 13-0 vote and Cuba and Yemen abstain. In private Mrs Thatcher concerned about the enforcement of 661 but in public warned Baghdad that Iraq faces NATO retaliation. Riyadh moved forces to the border with Iraq. US Secretary of Defense Dick Cheney travelled to Saudi Arabia and Egypt to discuss deployment of US Forces. Egypt granted permission for US ships to transit Suez Canal. The Gulf Co-operation Council meeting resolution condemned Iraq.

7 August – Saudi Arabia requested US aid to defend their country against Iraq. President Bush ordered 4,000 combat troops and air craft to Saudi Arabia. USS Independence Carrier Battle Group arrived in Gulf of Oman; USS Dwight D Eisenhower Carrier Battle Group transited Suez Canal en route to Red Sea.

8 August – The USA announced first deployments in response to request from Saudi Arabia. Iraq formally annexed Kuwait. First US troops from 101st Airborne Division arrived in Saudi Arabia. The decision was made that RFAs Fort George, Diligence and Olna should deploy to Gulf.

9 August – UNSCR 662 recalled UNSCRs 660 and 661, stating that the annexation of Kuwait by Iraq under any form was illegal and asked that there should be no international recognition of the annexation. Iraq closed borders. Operation GRANBY began. The UK announced first deployments of Tornado F3s and Jaguars to Gulf. UN declared Iraqi annexation of Kuwait invalid. Advanced RAF party under Group Captain R.S. Peacock-Edwards arrived at Dhahran, Saudi Arabia, to prepare for arrival of RAF detachment. AVM 'Sandy' Wilson appointed Air Commander British Forces Arabian Peninsula with HQ at Riyadh, Saudi Arabia.

10 August – The Arab League met in Cairo and voted by a narrow margin to send Egyptian, Syrian and Moroccan troops to join the Western troops to defend Saudi Arabia. Saddam Hussein declared 'jihad' against the US and Israel; UK refused to close Embassy in Kuwait. USAF F-16s and C-130s begin arriving in Saudi Arabia.

11 August – The first British aircraft arrived in Saudi Arabia. No 5 (Composite) Squadron [Tornado F3] arrived at Dhahran from Akrotiri, Cyprus. No 6 (Composite) Squadron, with 12 Jaguar GR1As left Coltishall for Thumrait, Oman. Egyptian troops arrived in Saudi Arabia; Saddam Hussein allowed the nationals of third world and Arab states to leave Iraq and Kuwait.

12 August – No 6 (Composite) Squadron arrived in Oman. The first Nimrod MR2P leaves Kinloss for Seeb, Oman, to help enforce the maritime blockade. Detachment of VC10 tankers of No 101 Squadron established at Seeb, Oman. Saddam Hussein's peace plan linked Iraqi withdrawal from Kuwait with the resolution of all other outstanding problems in the Middle East. The peace plan was rejected by the USA and Israel and the Arab members of the coalition.

13 August – UNSCR 666 recalled UNSCRs 661 and 664 and reminded Iraq of its humanitarian responsibilities to third state nationals and asked the Secretary-General to report on the food situation in Iraq and Kuwait. The RN began to stop and search Iraqi shipping to enforce sanctions. RN Minesweepers left for the Persian Gulf.

14 August – The UK announced additional naval forces for Gulf. First elements of US 1st Marine Expeditionary Force and 7th Marine Expeditionary Brigade arrived in Saudi Arabia. President Bush threatened to blockade Aqaba if Jordan did not support the UN sanctions.

15 August – Iran and Iraq reopened diplomatic relations after Iraq proposed peace talks. The Saratoga Carrier Battle Group transit Straits of Gibraltar. The USS John F Kennedy Carrier Battle Group left USA.

16 August – King Hussein of Jordan went to Washington to meet President Bush. Saddam Hussein ordered 4000 Britons and 2500 Americans in Kuwait to report to hotels. British weapons bound for Jordan stopped. UN Secretary-General Pérez de Cuéllar said that the use of force to back sanctions was not permitted unless agreed by the UNSC.

17 August – President Gorbachev declared Iraqi invasion 'an act of perfidy'. Six RAF Phantom FGR2s arrived at Akrotiri from Wildenrath, Germany, for local air defence.

18 August – Iraq declared that the nationals of 'hostile countries' still in Kuwait would be held as 'guests' at strategic sites in Kuwait. UNSCR 664 reaffirmed UNSCRs 660, 661 and 662 and that demanded that Iraq permit and facilitate the departure of nationals from third countries from within Iraq and Kuwait, calling for consular and diplomatic access to the third state nationals and denounced the use of human shields. Iraqi Foreign Minister Tariq Aziz said that Iraq would use chemical weapons if attacked by American nuclear warheads. In two separate incidents, USS Reid and USS Bradley fire warning shots across bows of two Iraqi tankers leaving Persian Gulf. Freighters heading for Iraq are diverted by USN ships.

19 August – The British government rejected calls for a recall of Parliament. Vice Admiral Henry H. Mauz USN appointed as Commander, US Naval Forces, Central Command.

20 August – Iraq ordered foreign embassies in Kuwait to close within four days.

21 August – Mrs Thatcher declared she would not negotiate over the hostages and urged the West to unite over sanctions. The UNSC declined to approve military force to enforce the embargo against Iraq. 6 Western European nations (UK, France, the Netherlands, Belgium Spain and Italy) agreed to co-ordinate naval operations to enforce sanctions.

22 August – The USA announced the call-up of reservists. China would not veto any UNSC resolution approving military action.

23 August – Saddam Hussein appeared on state television with Western hostages to whom he had refused exit visas. They were seen as human shields, though Saddam Hussein denied the claim. In the video he was seen ruffling the hair of a young boy named Stuart Lockwood. Britain announced plans for despatch of Tornado GR1s to Muharraq, Bahrain, and replacement of Dhahran Tornado F3s.

24 August – Deadline to close embassies in Kuwait passed and Iraqi tanks surrounded the embassies compounds. Iranian President Rafsanjani said that he had no objection to pushing Iraq out of Kuwait but that foreign forces would have to leave the region afterwards.

25 August – UNSCR 665 authorised member states to use limited naval force to verify that the trade embargo against Iraq was working giving the right to disable ships that refused to stop and have their cargoes inspected. UNSCR 666 approved the shipment of food to Iraq and Kuwait in humanitarian circumstances if it was distributed by the UN or similar bodies. The USA announced would deploy USAF F-111 aircraft to Saudi Arabia.

26 August – The UN voted to allow use of force to uphold sanctions on Iraq. C-in-C US Central Command, General Norman H Schwarzkopf, established command headquarters in Saudi Arabia. Mrs Thatcher said there could be no negotiations with 'a dictator, a despot, a tyrant' in advance of UN Secretary-General Pérez de Cuéllar's meeting with Iraqi Foreign Minister Tariq Aziz due to take place in Amman on 29 August. Austria's President Kurt Waldheim urged the West to talk to Saddam Hussein following his return from Baghdad after securing the release of 95 Austrian hostages.

27 August – No 14 (Composite) Squadron RAF [Tornado GR1] sent to Muharraq (Bahrain).

28 August – Baghdad declared Kuwait Iraq's nineteenth province and renames Kuwait City as al-Kadhima. Saddam Hussein announced that foreign women and children were free to leave Kuwait. Defence Secretary Tom King's press conference in Dhahran as part of a three day tour to Saudi Arabia, Oman and Bahrain.

29 August – In Helsinki Mrs Thatcher called for all hostages to be released. The Leader of the Opposition, Labour Opposition Leader Neil Kinnock wrote to the Prime Minister to ask for the recall of Parliament. AVM Sir 'Sandy' Wilson became Commander British Forces Middle East (CBFME) as well as Air Commander (ACBFME).

30 August – The US Department of Defense announced that, to date, there had been around 250 interceptions and 4 boardings of ships as part of maritime blockade.

31 August – Talks in Downing Street between Mrs Thatcher and King Hussein of Jordan. Foreign Secretary Douglas Hurd visited HMS Battleaxe and later arrived in Qatar.

1 September – Jesse Jackson returned from Baghdad with 47 American hostages. Iraq began food rationing.

2 September – Mrs Thatcher said holding hostages was not a bar to military action and that Saddam Hussein would face Nuremburg-style war crimes trials if they were harmed. Pérez de Cuéllar conceded that his peace mission had failed.

3 September – Mrs Thatcher met the Crown Prince of Kuwait, Sheikh Saad al-Sabah.

4 September – A convoy of 150 British women and 156 children reached Baghdad from Kuwait and 66 other British nationals arrived at London Gatwick airport.

5 September – Saddam Hussein called for Arabs and Muslims to topple King Fahd of Saudi Arabia and President Mubarak of Egypt. King Hussein of Jordan visited Saddam Hussein after promising Foreign Secretary Hurd he would try and persuade Iraq to release the hostages and leave Kuwait; more British hostages moved from Kuwait to Baghdad. Mrs Thatcher promised funds to Jordan, Turkey and Egypt, the countries hardest hit by the sanctions.

6 September – House of Commons debate on Kuwait began. Mrs Thatcher said she would send more British forces to the region and in spite of RN recommendations the COS decide against sending a carrier. The Opposition urged that military action should only be taken with a specific UN Mandate.

7 September – In the Parliamentary debate Foreign Secretary Hurd said that the UK should not be bound to search for UN authority, 'it cannot be right to put that choice totally and wholly with the machinery of the UN ... we know that machinery includes vetoes'. The House of Commons voted: 437 to 35, in favour of UK participation in the Coalition. The EC agreed a US\$2 billion aid package for Jordan, Turkey and Egypt.

9 September – At the Helsinki Summit, Presidents Bush and Gorbachev issued a joint statement demanding Iraqi withdrawal from Kuwait.

10 September – US Secretary of State James Baker asked NATO countries for a bigger military contribution to the region, and for tanks in particular; Iran and Iraq resume diplomatic relations. Saddam Hussein offered free oil to the Third World.

11 September – The Overseas and Defence Committee took the decision in principle to send an armoured brigade.

12 September – Iranian Ayatollah Khamenei declared that the American presence in the Gulf represented a holy war and suggested that Iran would send food and medicines to Iraq. Brigadier Patrick Cordingley told to prepare to deploy to Saudi Arabia.

13 September – James Baker visited President Assad in Syria. The USA told allies that war would be unlikely for another 2 months.

14 September – Secretary of State for Defence Tom King announced deployment of 7th Armoured Brigade and that a further squadron of Tornado GR1s would deploy to the Gulf, and a further six Tornado F3s would also be sent, the purpose of the forces being ‘to ensure that Saddam Hussein understand that while we seek the implementation of the UN resolutions by peaceful means, other option remain available and, one way or another, he will lose’.

16 September – Egypt pledges another 15,000 troops (Syria committed 11,000 the previous week). The UN Security Council condemned the raids by Iraqi troops on French and other diplomatic missions in occupied Kuwait.

17 September – Britain expelled 31 Iraqi envoys and civilians and other EC countries do the same and 1400 British citizens were still trapped in Kuwait. The USSR and Saudi Arabia restored diplomatic relations.

19 September – Six Tornados from RAF Laarbruch, Germany, to Bahrain, followed by six more on 26 September for second unit here. No 617(C) Squadron (Wg Cdr Bob Iveson).

20 September – Defence Secretary Tom King and US Defense Secretary Dick Cheney agreed on the military command structure in the Gulf and that British forces would be under US command.

21 September – Saddam Hussein ordered the expulsion of European and Egyptian military attaches and support staff.

23 September – French President François Mitterrand’s peace plan.

24 September – 2 Labour MPs in Amman to petition for help in finding the 35 British military advisors in Kuwait who appeared to have ‘disappeared’ in Iraq.

25 September – UNSCR 670 passed to establish an air blockade of Iraq except in humanitarian circumstances and it called on states to detain registered Iraqi ships which enter their ports and have been or are being used to violate sanctions. The USSR was prepared to send troops to the region under a UN commander. Moscow backs the use of force if sanctions fail.

27 September – Foreign Secretary Douglas Hurd announced that diplomatic relations with Iran are to be restored.

28 September – British troops of 7th Armoured Brigade embarked for the Persian Gulf by sea, arriving 18 October.

30 September – Mrs Thatcher called for Iraq to give reparations to Kuwait after they withdraw. The Royal Navy conducted first boarding of merchant vessel in Gulf.

1 October – Lt Gen Sir Peter de la Billiere became Commander British Forces Middle East with AVM Wilson as Deputy. 7th Armoured Brigade to be located with the USMC. President Bush hinted that a wider Middle East settlement was possible if the Iraqis withdrew from Kuwait. Douglas Hurd at CSCE meeting in New York. New York Declaration granted sovereignty to a united Germany.

3 October – Saddam Hussein visited Kuwait. The Soviet Special Envoy Yevgeny Primakov met King Hussein of Jordan and Yasser Arafat in Amman. German reunification day.

4 October – Primakov arrived in Baghdad.

8 October – Britain joined the ERM. The USA condemned Israel in the UN over the death of 19 Palestinians on Temple Mount, Jerusalem.

9 October – Saddam Hussein claimed to possess a new ballistic missile which could reach Israel.

11 October – RAF Tristar flew from Gütersloh, Germany, to Saudi Arabia, with advanced party of 7th Armoured Brigade. The main airlift started 16 October employing mix of RAF and civilian aircraft.

12 October – Douglas Hurd flew to the Middle East. Edward Heath went to Amman and then on to Iraq. UNSCR 672 condemned Israel for the Mount Temple shootings and ordered an investigative mission to Israel.

14 October – Hurd and Edward Heath clashed over Heath's hostage mission. While in Cairo, Hurd condemned Saddam Hussein invasion of Kuwait and said that if he does not leave peacefully he would be made to do so at gun point. The Israeli Cabinet decided not to co-operate with the UN mission on the Temple Mount shooting.

18 October – Israeli PM Yitzhak Shamir agreed to attend a Middle East peace conference in Madrid later in the month.

21 October – Edward Heath met Saddam Hussein.

23 October – Edward Heath returned from Baghdad with 33 freed British hostages.

24 October – Plans announced for despatch of RAF Puma support helicopters.

28 October – The EC summit in Rome deplored Saddam Hussein's attempt to divide the alliance and undertook not to send European envoys to Baghdad to negotiate the release of hostages.

29 October – UNSCR 674 passed demanded that Iraq fulfil its obligations to third State nationals in Kuwait and Iraq, including the personnel of diplomatic and consular missions, under the Charter, the Fourth Geneva Convention, the Vienna Conventions on Diplomatic and Consular Relations.

30 October – The USA urged compromise and a land for peace deal.

1 November – First RAF Puma HC1s leave Brize Norton via USAF C5 Galaxy.

4 November – US Secretary of State, James Baker, arrived in Saudi Arabia as part of an eight day, seven nation tour of the region.

5 November – Baker and King Fahd of Saudi Arabia agreed on the joint command of operations in Saudi Arabia and US command in Iraq and Kuwait.

6 November – The US Congressional elections.

7 November – Former German Chancellor Willi Brandt's trip to Baghdad resulted in the release of 120 hostages. In the House of Commons Mrs Thatcher said if Iraq did not leave Kuwait soon that the Coalition would drive Iraqi forces out.

8 November – The USA announced substantial reinforcement of forces to Saudi Arabia and Gulf area, including three aircraft carriers and the battleship USS Missouri. Moscow meeting of Baker and Shevardnadze; the USSR did not rule out the use of force as long as it was in a UN context.

12 November – The Second Secretary of the British Embassy in Baghdad, James Tansley, was expelled from Iraq. Britain responded by expelling the Second Secretary of the Iraqi Embassy in London.

13 November – China indicated that it would not block any UN Resolution on the use of force against Iraq.

14 November – US Secretary of Defense Dick Cheney announced activation of 72,500 more reservists. Egypt, Syria and Kuwait reject King Hassan of Morocco's call for an emergency meeting of the Arab League to avert war.

15 November – Saddam Hussein said he was willing to negotiate as long as he was not required to withdraw from Kuwait first. Bush expresses willingness to talk but would not compromise on the issue of withdrawal. Bush calls up an additional 72,000 reservists.

15-21 November – Exercise Imminent Thunder conducted in Saudi Arabia.

17 November – AVM W J 'Bill' Wratten replaced AVM Wilson as ACBFME and Deputy CBFME.

18 November – CSCE meeting in Paris to negotiate the CFE treaty. Saddam Hussein declared he would release the hostages by Christmas. Lieutenant-General Sir Peter de la Billière told Saudi journalists that war would be over in days.

19 November – At the CSCE meeting Presidents Bush and Gorbachev condemned Iraq but Gorbachev rebuffed Bush's attempts to secure Soviet backing for the use of force as he wanted negotiations to be given every chance.

20 November – Saddam Hussein announced that all German hostages would be released following Chancellor Kohl's call for a negotiated settlement.

22 November – Mrs Thatcher steps down as Prime Minister. The UK announced deployment of 4th Armoured Brigade, a divisional headquarters, and supporting units to form 1st (British) Armoured Division – 14,000 more troops to be sent.

23 November – Presidents Bush and Assad met in Geneva and agreed the invasion of Kuwait was 'unacceptable'.

24 November – First RAF Chinook HC1s flown to Saudi Arabia inside USAF C-5 Galaxy transports from Mildenhall.

25 November – Under-Secretary of State at the FO, David Gore-Booth was joined by 3 British MPs in Syria as Britain prepared to resume diplomatic relations with Damascus. 14 British peers and MPs visited British forces in Saudi Arabia. The equipment of 4th Armoured Brigade loaded in Germany for sea transport to Saudi Arabia.

26 November – The 5 permanent members of the UNSC reached agreement on a draft resolution on a 'pause of goodwill' before the use of force but disagreed over the deadline; at a press conference in Saudi Arabia, Air Chief Marshal Sir Patrick Hine ruled out the annihilation of Iraqi power. Tony Benn arrived in Baghdad to promote a peace settlement. President Gorbachev told Foreign Minister Tariq Aziz that Iraq should withdraw from Kuwait and release all hostages.

27 November – John Major became Prime Minister. President Gorbachev backed the use of force.

28 November – UNSCR 677 asked the UN Secretary-General to keep safe a copy of Kuwait's pre-invasion population register.

29 November – UNSCR 678 set a deadline for Iraq to withdraw from Kuwait before 15 January 1991 and authorised 'all necessary means' to force Iraq out if it did not comply; Yemen and Cuba voted against and China abstained from the UNSC vote. Coalition forces in the region go to 'yellow' alert; in Jubail, Brigadier Patrick Cordingley warned the British public to expect a lot of casualties. Tony Benn left Iraq with 15 British hostages. Commodore Christopher Craig succeeded Commodore Paul Haddocks as commander of RN task force in Gulf.

30 November – Bush's 'extra mile offer', invited Iraq to hold direct talks with the USA.

1 December – Saddam Hussein agreed to direct talks as long as they were linked to the Palestinian question.

4 December – Prime Minister Major and Defence Secretary Tom King met US General Colin Powell in Downing Street.

6 December – Saddam Hussein announced the release of 3,000 foreign nationals being held in Iraq and Kuwait. Israeli Premier Itzhak Shamir meets Major in London and Major said that Britain favoured an international conference on the Middle East.

9 December – King Hussein of Jordan called for Arab states to join in dialogue in parallel with talks between the USA and Iraq. USA rejected Saddam Hussein's proposed date for bilateral talks on 12 January as too late.

10 December – In a speech to the Voroshilov Academy in Moscow, Chief of the Defence Staff, Marshal of the RAF Sir David Craig talked of his fears of 'substantial' casualties; 100 British hostages arrived home.

11 December – In a House of Commons debate on Kuwait, Foreign Secretary Douglas Hurd suggested that sanctions alone might not be enough to achieve Iraq's withdrawal from Kuwait. US President Bush made an undertaking to Prime Minister Shamir that a resolution of the Gulf crisis would not occur at Israel's expense.

14 December – RAF Victor K2 tankers No 55 Squadron left RAF Marham for Muharraq, Bahrain, followed by three more next day.

16 December – HM Ambassador to Kuwait, Michael Weston, and the British Consul Larry Banks flew out of Kuwait for Baghdad accompanied by 10 other British citizens.

17 December – The UK government warned British citizens in the Gulf region to send their families home before the 15 January deadline. The government called for 1500 medical volunteers.

18 December – The EC ruled out peace talks until US President Bush met Iraqi Foreign Minister Tariq Aziz.

21 December – Prime Minister John Major arrived in Washington where he pledged total support for the USA and said that a partial Iraqi withdrawal from Kuwait would not be good enough.

22 December – HRH Prince of Wales visited British forces in the Gulf.

23 December – Atlantic Conveyor loads at Southampton Docks with four RAF, Pumas eight Chinooks and 12 RN Sea Kings. Arrived Jubail, Saudi Arabia, 8 January 1991.

24 December – Saddam Hussein said that Israel would be his first target if war breaks out.

25 December – Shamir warned of severe Israeli retaliation if Iraq attacks her.

26 December – Saddam Hussein said that he was ready for 'serious and constructive dialogue'.

28 December – The biggest British call-up of reserves since the 1956 Suez Crisis.

29 December – Classified MOD documents relating to the situation in the Gulf were stolen from a car in London.

30 December – Planned despatch of third RAF Tornado GR1 squadron to the Gulf was announced.

1991

2 January – NATO approved deployment of air defence aircraft to Turkey. King Husain of Jordan arrived in London. A French peace mission to Baghdad. The British government called for volunteers from naval reserves.

3 January – UK expelled all Iraqi diplomats remaining in the country.

4 January – Iraq accepted offer of final talks, to be held in Geneva on 9 January.

6 January – US Secretary of State James Baker in London for talks. Saddam Hussein said he was ready for the ‘mother of all battles’.

8 January – US Secretary of State Baker visited Paris, Bonn, Milan and Geneva. Prime Minister Major in the Middle East and visited British forces in Saudi Arabia. Israeli forces placed on highest state of alert.

9 January – US Secretary of State met Iraqi Foreign Minister in Geneva but several hours of talks failed to produce results.

10 January – UN Secretary General Pérez de Cuéllar flew to Baghdad. The Cabinet discussed contingency plans. Foreign Secretary Hurd flew to the Middle East to reassure Allies. HM Ambassador to Iraq Harold Walker and his staff arrive in Amman while British Counsel-General Christopher Segar remained as acting Head of Mission.

12 January – US Congress voted in favour of war, by 250 votes to 183 in House of Representatives and 52 votes to 47 in the Senate.

13 January – UN Secretary General had fruitless meeting in Iraq. RAF Tornado GR1 was lost in a fatal flying accident in Saudi Arabia.

14 January – Prime Minister Major flew to Paris. France proposed that the UNSC call for ‘a rapid and massive withdrawal’ from Kuwait along with a statement to Iraq that Council members would bring their ‘active contribution’ to a settlement of other problems of the region, ‘in particular, of the Arab-Israeli conflict and in particular to the Palestinian problem by convening, at an appropriate moment, an international conference’ to assure ‘the security, stability and development of this region of the world’. The French proposal was supported by Belgium (one of the rotating Security Council members), and Germany, Spain, Italy, Algeria, Morocco, Tunisia, and several non-aligned nations. The USA and UK rejected it, along with the Soviet Union. MOD issued guidelines to the media.

15 January – UN deadline expired. House of Commons voted 534 to 57 in favour of UK participation in the Coalition. 580,000 coalition troops in the Gulf faced 540,000 Iraqi troops.

16 January – In the Foreign Affairs Committee, Foreign Secretary Hurd said that Britain and the USA would consider the use of nuclear weapons if Iraq acquired a nuclear capability.

17 January – Operation DESERT STORM began with air strikes against Iraq. President Bush promised to crush Iraqi chemical and nuclear plants. 07:00 meeting of the British War Cabinet (Major, King, Hurd, John Wakeham [Energy Secretary] and CDS Marshal of the RAF Sir David Craig). Major made a statement to the House of Commons and broadcasts to the nation. One RAF Tornado GR1 failed to return from operations.

18 January – Iraqi Scud missile attacked against Tel Aviv and Haifa (03:00 local; 01:00 GMT). The USA warned Israel against retaliation saying it was an attempt to widen the war and break up the opposition. US President Bush declared that Israel would not respond; Patriot missiles deployed to Israel and Saudi Arabia. The MOD announced a second British Tornado aircraft was missing.

19 January – Iraq began to release oil into Gulf. US troops raid oil platforms off Kuwait, capturing first Iraqi prisoners of war.

20 January – Iraqi television broadcasts pictures of seven captured coalition airmen; Iraq fires 10 Scuds at Saudi Arabia. The Iraqi Ambassador to London, Azmi Shafiq al-Salihi summoned to the FCO to be reminded of his country's obligations under the Geneva conventions. The bombing of Iraqi targets in Kuwait began.

21 January – Iraq declared POWs have been scattered as human shields. In a House of Commons debate Prime Minister Major pledged there would be no pause in fighting until Iraq withdrew from Kuwait. An assessment of the conflict so far – 8000 sorties and 30 aircraft destroyed. Queen Elizabeth visited Portsmouth.

22 January – Iraq launched more Scuds at Saudi Arabia. An Iraqi Scud hits Tel Aviv killing 3 and injuring 70. Iraq began blowing up Kuwaiti oil wells. 5 Tornados lost in air campaign to date. Another RAF Tornado GR1 failed to return from operations.

23 January – The USA denied Iraqi claims that the coalition bombed a baby-food factory. The Coalition claimed it had achieved air superiority.

24 January – The first indication of Iraqi aircraft fleeing to Iran. Coalition forces capture the island of Qarawa. Prime Minister Major addressed the 1922 Committee. RAF to deploy Buccaneers with Pave Spike laser designator pods and four Tornado GR1s with capability to employ the new TIALD designator pod.

25 January – Japan announced sending of aircraft to support non-combat coalition missions. Iraqi Scuds fired at Israel and Saudi Arabia. Lieutenant-General Sir Peter de la Billière said Iraqi pilots were too scared to fight.

26 January – USAF F-111s employing guided weapons destroyed manifolds at Sea Island which have been releasing oil into Gulf to stem flow of oil and the spill continued to grow in meantime. The Pentagon confirmed the USS Louisville was the first submarine to launch a cruise missile in combat. More Scuds were fired at Israel and Saudi Arabia.

27 January – Defence Secretary Tom King said that Iraq would not be allowed to withdraw from Kuwait leaving their war machine intact.

28 January – Saddam Hussein said he would use nuclear weapons if he must.

29 January – US-USSR communiqué offering a cease-fire if Iraq made an 'unequivocal commitment' to withdraw from Kuwait. 17 Iraqi fast patrol boats were destroyed.

30 January – Iraqi forces invade Saudi Arabia, entering town of Al Khafji and were forced to withdraw by end of 31 January.

1 February – Saudi and Qatari troops, backed by US artillery, retake Al Khafji, Saudi Arabia. The Coalition bomb 10-mile-long Iraqi armoured column headed into Saudi Arabia.

2 February – RAF Buccaneers flew first sorties in support of Tornado GR1 laser-guided bomb attacks. Scud attacked on Israel and Saudi Arabia.

4 February – Iran offered to mediate peace talks and resumed official relations with the USA. The war entered third phases as freedom of the air and sea control was achieved. Bush declared 'our goal is not the conquest of Iraq, but the liberation of Kuwait'.

5 February – The first Syrian troops in combat action repulse Iraqis along the Kuwait-Saudi Arabian border.

6 February – King Hussein of Jordan made a tribute to the Iraqi people's courage in what he called 'the war against Islam'.

7 February – The Provisional IRA launched a mortar attack against 10 Downing Street, blowing in all the windows of the Cabinet Room during a session of the War Cabinet. US Defense Secretary Dick Cheney and Colin Powell went to the Gulf. US reviews American aid to Jordan. Lieutenant-General Sir Peter de la Billière said that a ground war was inevitable.

8 February – En route to Saudi Arabia, US Defense Secretary Cheney gave strongest indication to date that a ground war was coming. Defence Secretary King announced that the coalition has wiped about approximately 20 per cent of Iraq's battle winning equipment. Foreign Secretary Hurd arrived in Egypt.

9 February – US Defense Secretary Cheney, Powell met Schwarzkopf and other military leaders. Gorbachev warned against operations exceeding the UN Mandate and announced he was sending Primakov to Baghdad.

12 February – Coalition shifted focus of air and artillery attacks to Iraqi forces in Kuwait.

13 February – USAF F-117 'stealth fighters' dropped two bombs on fortified underground facility in Amiriya, Baghdad (also known as the Al Firdos Bunker). Iraqi officials claimed at least 500 civilians (Coalition claim approximately 300) were killed in what they claimed to be a bomb shelter. The UN Security Council voted to meet in camera to discuss war.

14 February – Pentagon announced Allied planes have destroyed at least 1,300 of Iraqi 4,280 tanks, 800 of 2,870 armoured vehicles and 1100 of 3110 artillery pieces. The UN Security Council met in closed session to discuss the war and Secretary General Pérez de Cuéllar said he saw no hope of a ceasefire unless Iraq withdraws.

15 February – Iraq announced she was prepared to withdraw from Kuwait but added a long list of conditions which included Israeli withdrawal from the 'occupied territories', cancellation of Iraqi debt and a commitment by the coalition to rebuild Iraq. Bush dismissed the Iraqi offer as a 'cruel hoax' and challenged the Iraqi people to topple Saddam Hussein. Coalition forces reinforced the front in preparation for the ground offensive.

16 February – Iraq claimed 130 civilians were killed by RAF Tornados in bombing raid; Scuds attacks against Israel. Abdul Amir Al-Anbari, the Iraqi Ambassador to the UN declared Iraq would use WMD if coalition bombing continued.

17 February – Tariq Aziz, Iraqi Foreign Minister, arrived in Moscow for talks.

18 February – The IRA bombs Paddington and Victoria railway stations. In the House of Commons Foreign Secretary Hurd said that the Iraqi peace offer represented an attempt to divide the Coalition.

19 February – A Baghdad Radio report announced Foreign Minister Aziz's return to Baghdad with a Soviet peace proposal. US President Bush declared the Soviet proposal was 'well short' of what would be required to end the war.

20 February – US General Schwarzkopf announced Iraq was on the 'verge of collapse'. Baghdad Radio report announced Foreign Minister Aziz would go to Moscow with the Iraqi reply to the peace proposals.

21 February – Vitaly Ignatenko, a Soviet spokesman, announced Iraq and the Soviet Union had agreed on plan that could lead to Iraqi withdrawal. Saddam Hussein declared Iraq remains ready to fight ground war. Cheney declared the coalition was preparing 'one of the largest land assaults of modern times'. In a House of Commons debate the Minister of State at the FCO Douglas Hogg declared that the overthrow of Saddam Hussein was not a war aim.

22 February – Soviet diplomatic efforts to secure peace failed, when Iraq refused to consider unconditional acceptance of UN resolutions. Coalition issued statement setting out final terms for cessation of hostilities with a deadline for acceptance of 23 February. Iraq rejected this deadline, and commenced firing Kuwaiti oil wells.

23 February – The Coalition ground assault began at 20:00 EST (USA); Iraqis ignited an estimated 700 oil wells in Kuwait. US President Bush declared 'the liberation of Kuwait had reached its final phase'.

24 February – The Coalition ground assault began in Iraq at 04:00 local time. The first day of ground war resulted in the capture of 5500 Iraqis. 300 coalition attack and supply helicopters strike 50 miles into Iraq. The SAS was the first to enter Iraqi territory. HM Queen Elizabeth's broadcast told the country she prayed for victory. Major said coalition military plans 'are ahead of schedule'.

25 February – Coalition forces were reported on the outskirts of Kuwait City on Kuwait's Independence Day. Iraqi Scud attacks on US base at Dhahran, Saudi Arabia killing 28; 1st (British) Armoured Division entered Kuwait; HMS Gloucester shot down Iraqi Silkworm missile.

26 February – Iraqi forces in full retreat with coalition forces in pursuit. Saddam Hussein announced the Iraqi forces would withdraw from Kuwait completely, but he did not renounce claim to Kuwait. Approximately 10,000 Iraqi troops in retreat were killed when bombed by coalition forces along the 'Highway of Death'. Iraqi POWs number more than 30,000.

27 February – The Iraqi Republican Guard encircled. The first Kuwaiti troops entered Kuwait City. US President Bush declared 'Kuwait is liberated. Iraq's army was defeated. Our military objectives are met' and the suspension of offensive combat and ordered a cease-fire effective at

midnight Kuwait time. The Coalition said they had destroyed more than half the Iraqi divisions and captured 500,000 prisoners. Within Iraq, Saddam crushed Shi'ite and Kurdish opposition. Michael Weston flew to Riyadh to then go on to Kuwait to re-open the British Embassy.

28 February – Kuwait was liberated, and Coalition suspended offensive operations; Iraq agreed to comply with UN demands. In the House of Commons, Prime Minister John Major said it represented a 'victory for what is right', that Iraq must lose its WMDs and in a broadcast on the BBC said he believed that Saddam Hussein's days as leader were likely to be numbered. It was reported that 42 Iraqi divisions were destroyed, 3700 out of 4200 tanks destroyed, 2100 artillery pieces out of 3100 destroyed, 1800 out of 2800 armoured vehicles destroyed, 60,00 Iraqis taken prisoner, 16 British armed forces killed in action and 12 British aircrew missing.

1 March – Cease-fire terms were negotiated in Safwan, Iraq. Rumours circulate that Saddam Hussein would step down and seek asylum in Algeria. King Hussein of Jordan turned his back on Saddam Hussein and looked forward to 'a new Arab era'.

2 March – 24th Infantry Division fought Hammurabi Division as it fled, destroying 600 vehicles. UNSCR 686 noted that all the previous 12 Resolutions continue to have full force, set out the terms of the cease-fire, including the return Kuwaiti property and to give information about WMD and mines in Kuwait and Iraq.

3 March – Iraqi leaders formally accepted cease-fire terms. Defence Secretary Tom King arrived in Bahrain.

4 March – Ten coalition POWs were freed. Basra fell to Shi'ite rebels and the Kurds also rose up against Saddam Hussein. Crown Prince Sheikh Saad al-Sabah of Kuwait returned home.

5 March – Thirty-five coalition POWs were released. Prime Minister Major in Moscow for Middle East peace talks.

6 March – Prime Minister Major visited Kuwait. The Shi'ite rebellion faces attacked by the Republican Guard; the Kurds control 5 cities in the North. In the House of Commons Defence Secretary Tom King reported that 36 British members of the Armed Forces had been killed and 43 injured, 45,000 involved in the conflict and that the cost of the war would be £1.75 billion. The RAF had flown 6,500 sorties since 17 January and had dropped 3,000 tonnes of explosives. RN helicopters had sunk or disabled 15 patrol craft and had traced 228 mines and destroyed 133. The British Army had destroyed 200 tanks, 100 armoured vehicles and 100 artillery pieces.

8 March – After two weeks of non-stop minesweeping operations, the port of Kuwait City was declared safe and allowed to reopen.

14 March – The Emir of Kuwait returned from exile.

17 March – The USA rejected Iraq pleas to use war planes to put down the revolt.

20 March – USAF F-15 shot down Iraqi Su-22 breaching terms of truce.

21 March – China called for an early end to sanctions.

1 April – Border incidents took place between Iran and Iraq and Kurdish refugees fled into Turkey.

3 April – UNSCR 687, allowing Saddam to stay in power but demanding he destroy all weapons of mass destruction, established UNSCOM and tasked the IAEA, a UN Peacekeeping Observer mission would be established on the border to deter border violations, economic sanctions are to remain in place (this gives way to the oil-for-food programme in August). There would be compensation made by Iraq for war damage; Iraqi officials began hiding weapons and data. Turkey and Iran closed their borders.

4 April – Iran and Turkey re-open their borders, 1 million refugees; UK provided £20 million to UN appeal for refugees.

5 April – US President Bush announced Coalition relief supply airdrops to Kurdish refugees in Turkey and northern Iraq. Britain stops short of declaring events in Iraq as 'genocide'. UNSCR 688 condemned the repression of the Iraqi population and Kurds in particular and urged Baghdad to co-operate with international humanitarian relief operations and began preparations for Operation Provide Comfort.

6 April – Iraq accepted UN terms for a formal cease-fire.

7 April – Iran closed border with Iraq after taking in half a million refugees.

8 April – Prime Minister John Major, at the European Council meeting in Luxembourg, proposed the Safe Havens initiative. US President Bush initially sceptical about this plan.

9 April – UNSC approved Resolution 689, establishing a United Nations Iraq-Kuwait Observer Mission to monitor a permanent cease-fire.

10 April – Britain and the USA threaten renewed military action against Saddam Hussein over the Kurdish refugee situation. The USA supports the Safe Havens plan.

11 April – UNSC announced that a formal cease-fire has been established, ending the Gulf War. The first UN observers would be sent to the Iraq-Kuwait border.

15 April – Iraq allowed the UN in to aid the Kurds. In the House of Commons Foreign Secretary Hurd said that the priority was now to help the Kurds, committed British helicopters to Turkey to aid this effort, rejects called for the use of force to remove Saddam Hussein and announced that Lynda Chalker, the Minister for Overseas Development, would visit Iran.

16 April – British, French and American troops went into Northern Iraq to establish the safe havens.

18 April – Iraq agreed to the UN aid operation.

Aftermath

1992

August – US President Bush declared a 'no-fly' zone for Iraqi aircraft in southern Iraq, adding to a similar no-fly zone declared over the Kurdish north of Iraq in 1991. The policy was aimed at protecting Kurds and Shi'ites in the two regions from being attacked from the air by Saddam's forces. But it applied only to fixed-wing aircraft. Saddam continued to attack rebellious Shiites in the South with helicopter gunships. By then, Saddam Hussein had crushed the Kurdish and Shiite rebellions Bush had encouraged, but not defended. The Matrix-Churchill Arms to Iraq trial collapsed.

1993

14 April – Former US President Bush visited Kuwait; police arrest 14 people in a plot to assassinate the ex-President. US President Bill Clinton ordered a retaliatory strike against Iraqi intelligence headquarters.

June – US forces launched a cruise missile attack on Iraqi intelligence headquarters in Baghdad in retaliation for the attempted assassination of former President George Bush in Kuwait in April.

1994

10 November – Iraqi National Assembly recognised Kuwait's borders and independence.

1995

14 April – UNSCR 986 allowed the partial resumption of Iraq's oil exports to buy food and medicine (the 'oil-for-food programme').

October – Saddam Hussein won a referendum allowing him to remain president for another seven years.

1996

August – After call for aid from KDP, Iraqi forces launched offensive into northern no-fly zone and capture Irbil.

September – The USA extended northern limit of southern no-fly zone to latitude 33 degrees north, just south of Baghdad.

Publication of the Scott Report into arms to Iraq and the government survived a vote of no confidence, 319-320.

1998

5 August – Iraq suspended all co-operation with UN weapons inspectors. After four months of fruitless Security Council negotiations, Clinton ordered four days of air strikes beginning December 16. Weapons inspectors did not return to Iraq. The USA shifted to a strategy of containing Saddam.

October – Iraq ended co-operation with UN Special Commission to Oversee the Destruction of Iraq's Weapons of Mass Destruction (UNSCOM).

31 October – President Clinton signed the Iraq Liberation Act.

16-19 December – After UN staff were evacuated from Baghdad, the USA and UK launched a bombing campaign, Operation Desert Fox, to destroy Iraq's nuclear, chemical and biological weapons programmes.

1999

February – Grand Ayatollah Sayyid Muhammad Sadiq al-Sadr, spiritual leader of the Shi'ite community, was assassinated in Najaf.

December – UNSC Resolution 1284 creates the UN Monitoring, Verification and Inspection Commission (UNMOVIC) to replace UNSCOM. Iraq rejected the resolution.

2001

February – Britain, USA carried out bombing raids to try to disable Iraq's air defence network. The bombings had little international support.

15 September – President George W. Bush signed a directive for the Afghan campaign and instructed the Pentagon to develop plans for a possible war in Iraq.

2002

June 1 – At West Point, President George W. Bush declared that the USA should be ready to use pre-emptive action against possible threats.

September 12 – US President Bush addressed the UN General Assembly and challenged it to hold Iraq to its promise to disarm. The following week the Administration discussed possible resolutions and stressed that Iraq would have 'days and weeks, not months', to comply. In the same month Prime Minister Tony Blair published a 'dodgy' dossier on Iraq's military capability.

October 10 – The US Congress authorised President Bush to use force against Iraq.

November 8 – Following two months of diplomacy and three proposals, the UN Security Council passed Resolution 1441 by a 15-to-0 vote. The first UNMOVIC teams arrived in Baghdad 17 days later. Iraq did not give inspectors full co-operation and refused to acknowledge stockpiles of chemical weapons.

2003

1 January – The first 25,000 US troops started deploying to the Persian Gulf region.

5 February – In an address to the Security Council, US Secretary of State Colin Powell presented the case for force against Saddam Hussein's regime. The USA's former War Coalition Allies were unmoved.

5 March – More than 200,000 US troops, five carrier groups and 1000 aircraft were in place or en route to the Middle East. France and Russia pledged to veto any resolution authorising force. Two days later, the UK began a final effort at diplomacy.

16 March – Bush, Blair and Spanish Prime Minister José María Aznar convened for a summit in the Azores. They announced the next day would be the UN Security Council's last chance to act.

17 March – President Bush issued an ultimatum to Saddam, giving him 48 hours to leave the country or face war.

19 March – Operation IRAQI FREEDOM began.

Introduction: Britain and the 1991 Gulf War

By Dr Michael Kandiah, Institute of Contemporary British History, King's College London

Dr David Jordan, Defence Studies Department, King's College London

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The publication of the transcript of the Institute of Contemporary British History's Witness Seminar *Britain and the Gulf War 1991* in this edition of *Air Power Review* marking the twenty-fifth anniversary of the 1991 Gulf War represents an opportunity for a formal re-appraisal of Britain's role during the conflict from political, diplomatic, economic, legal, intelligence and military perspectives. The following material captures the oral testimony of key practitioner-participants and examines from strategic, operational and tactical levels of decision-making both policy making and its execution. The oral history was captured during a Witness Seminar at the Joint Services Command and Staff College on 16 March 2011 and was conducted and recorded in front of an audience of expert academics and serving military officers. The transcript of the Seminar – which can best be described as a group interview – has been agreed and redacted by the participants, some of whom have gone 'on-the-record' for the first time (a list of participants is provided below).

The literature relating to the 1991 Gulf War remains largely US-centred. In the absence of an official British history of the conflict, accounts of Britain's role were largely written in the aftermath of 1991 and focused on specific aspects of policy; as an aspect of wider career biographies or Single Service military histories; and at a time when the Cold War was relatively fresh in the memory, reflecting the experiences, strategies and continuities with Cold War policies.¹ From current perspectives, with two decades of 'liberal interventions', counter-insurgency and stabilisation operations in the Balkans, the Middle East and Central Asia, the 1991 Gulf War is seen as less controversial than the 2003 conflict even though the debates over the termination of the conflict in 1991, the establishment of the no-fly zone and the commitment to saving the lives of millions of Kurds from a potential post-1991 genocide remain part of a wider history of the consequences of western intervention in the Middle East. Together with the concomitant contemporary debates over the ability of the UK to mount a high-intensity warfighting operation in the future, we hope that this reappraisal of the conflict from a British perspective will be of value to scholars and practitioners alike.

The Witness Seminar explored the perceptions, priorities and dilemmas facing British policy makers at the time and addresses gaps in the existing literature on the subject, in particular:

Britain's interests in the Persian Gulf after the retreat from East of Suez; British policy during the Iran-Iraq War and Britain's role in the Armilla patrol; the impact of the fall of the Berlin Wall in 1989 and the New World Order on British foreign policy and relations with the Gulf States; British intelligence assessments of Iraq; the impact of the reviews *Options for Change* and *Front Line First* on defence planning; reactions to the invasion, including legal issues and sanctions; the importance of the Anglo-American relationship in diplomatic, military and intelligence areas; planning for Operation GRANBY and the Command and Control relationships; the conduct of the operation from Air, Maritime and Land perspectives; the information war and strategic communications; the strategic consequences and lessons of the campaign.

The Witness Seminar is divided into three sections. Section One examines the origins of the conflict up to DESERT SHIELD. Section Two covers the prosecution of the conflict and Section Three covers the aftermath of the conflict. The Witness Seminar material ends with the transcripts of two separate interviews on the Gulf War conducted with Lords King and Wakeham.

Background and Origins of the Conflict

The Iraqi invasion of Kuwait was preceded by a period of tension in relations between Iraq and Britain. In 1961 Britain used military force to maintain the independence of Kuwait against a previous Iraqi attempt at annexation, and as Freedman and Karsh have noted that for the British 'intervening East of Suez is like riding a bike: you never lose the knack'.² Following a declared policy of taking no sides during the Iran-Iraq war and a contribution to the stability of the Gulf in the shape of the Armilla Patrol, Anglo-Iraqi relations in the 1980s were characterised by the importance of the economic relationship and by 1990 Britain is Iraq's third largest trading partner. In this economic relationship weapons sales were important but not without controversy as the case of the 'supergun' attests. While wary of developments of Iraqi nuclear capabilities, and the difficulties over the Bazoft case in March 1990 which led to the recall of the British Ambassador to Iraq, Harold Walker, Britain wanted to restore positive dialogue in the months preceding the invasion.³

The focus of the first part of the Witness Seminar was a consideration of the characteristics of Anglo-Iraqi relations in 1990, including the extent to which the invasion caught Britain by surprise and whether Saddam Hussein's posturing had been taken seriously, what accounted for strategic inattention and a preoccupation with East-West developments and what if anything was Britain's position on Iraqi- Kuwait disputes prior to 2 August 1990?

Margaret Thatcher was in the United States at the time of the invasion and in her absence the Cabinet Overseas and Defence Committee agreed to impose economic sanctions. Freedman and Karsh note that eight days prior to the invasion the Defence Secretary Tom King announced *Options for Change* and that there was a 'concern in Whitehall that an "out of area" crisis might be used to obstruct these cuts'.⁴ The Seminar examined Britain's initial reaction to the Iraqi invasion, including an assessment of the British wider economic interests in the region

and the 50,000 strong ex-patriot community. The diplomatic aspects were discussed: British relations with states in the Middle East, the state of Anglo-American relations and the supposed British role in stopping George HW Bush 'wobbling'⁵ and Britain's role in the passage of the UN Security Council Resolutions on the crisis in August 1990.

Following the 9 August 1990 announcement of the initial deployment of British forces as part of Operation GRANBY, there were debates about the use of force, composition of the force package from a British point of view and the effectiveness of sanctions. Part of Saddam Hussein's strategy was the use of hostages and human shields as part of his aim of dividing international opinion and the coalition that was forming against him. The Seminar examined the debates within Britain on the use of force and sanctions, the importance of the hostages, the extent to which a cross-party consensus existed, as well as how the kind of forces and messaging about coalition intentions and resolve were determined during the build-up of DESERT SHIELD, including why Britain did not decide to send land forces until mid-August and why a British aircraft carrier was not deployed.⁶

During the early part of the crisis and the building of the Coalition against Saddam Hussein, changes occurred in relationships between states that had previously experienced less friendly relationships. The Seminar considered Britain's diplomatic role in maintaining the unity of the Coalition, British assessments of Russian policy, Britain's role in the co-ordination of the EC's diplomacy, Britain's relations with Iran and Syria and British attitudes to the peace initiatives that took place between July and November 1990.

In October and November 1990 the naval blockade was reinforced by the first ever air embargo in history. The death of 19 Palestinians on Temple Mount presented an opportunity to link the Iraq-Kuwait issue with the wider Middle East peace process. Military preparations, extra deployments of forces, the clarification of command and control arrangements and speculation about the nature of the war were made. In the midst of these preparations, Mrs Thatcher resigned and John Major became the new Prime Minister. The Seminar discussed the effectiveness of the naval blockade (7,500 challenges to ships in the Arabian and Red Seas until the end of the war) and air embargo, British views on the attempts to link Kuwait to more general issues in the Arab-Israeli conflict, the organisation of the War Cabinet and Ministerial roles, the command and control relationships with the Americans and the extent to which British forces would have operational flexibility, predications about the nature of the conflict and how long it would take, including the possibility of mass casualties and the effects of the change of Prime Minister.

On 29 November 1990 UNSCR 678 set the deadline for Iraqi withdrawal as 15 January 1991 and authorised 'all necessary means' to force withdrawal in the absence of Iraqi compliance. President Bush offered to hold direct talks with Iraq and Major visited Washington in December 1990. Saddam Hussein released Western nationals in Kuwait and Iraq. In the last remaining days of peace there were a number of last minute diplomatic initiatives including the talks between

US Secretary of State James Baker and the Iraqi Foreign Minister Tariq Aziz, a peace plan from the French government and UN Secretary-General Perez de Cuellar's visit to Baghdad. The Seminar discussed Britain's part in the formulation of the UNSCR 678, the challenges presented in achieving this use of force resolution and whether Britain really believed that a peaceful resolution to the crisis could be found.

Prosecution of the Conflict

In mid-January 1991, once the UN deadline passed, the air campaign commenced. The members of the Coalition discussed war aims. Coalition strategy focused on military, economic and political targets and to destroy Iraqi war making capabilities now and in the future. The Royal Air Force played an important part in the air campaign, initially flying low-level sorties against Iraqi airfields with notable losses, before transitioning to medium level missions. The Seminar discussed the issues of war aims, Anglo-American military planning and the options examined: direct attack versus indirect hook, the possibility of a 'nuclear' option, and how targeting decisions were made: WMD capabilities, electricity, command structure, problems with civilians and holy places. The discussion moved on to consider the value of the British military contribution, the challenge presented by Scud attacks on Israel and Saudi Arabia and the use of Precision Guided Weapons.

From early February 1991, the air war continued with a shift of focus to attacking Iraqi forces in Kuwait. An Iraqi incursion into Saudi Arabia at Al Khafji was repulsed. The Coalition war aims were reiterated as the liberation of Kuwait and not the deposal of Saddam Hussein. A significant distraction from the war for the British occurred on 7 February, when Downing Street was mortared by the Provisional IRA. The Coalition then had to deal with the negative repercussions of the Al Firdos bunker bombing, in which a military command centre was struck by precision munitions, only for it to transpire that the facility was being used as a shelter by Iraqi civilians. On 15 February Saddam Hussein declared he was prepared to withdraw from Kuwait but he made this dependent on the acceptance of what the Coalition saw as unacceptable conditions, and the war continued. With a ground offensive imminent, the USSR, as a formerly close ally to Iraq attempted to achieve a peaceful end to the war, but all attempts at an 11th-hour peaceful settlement were thwarted. In its consideration of this period, the Seminar discussed the British contribution to the air, sea and land campaigns; the degree of the distraction caused by the IRA bombings on 7 February against Downing Street and then on 18 February at Victoria and Paddington stations. Saddam Hussein's threat to use weapons of mass destruction were considered, along with the possibility of the Al Firdos bunker bombing incident as being a possible threat to Coalition unity.

With peace proposals rebuffed, the Coalition ground assault began on 23/24 February, lasting for 100 hours. The Iraqis respond by setting fire to Kuwaiti oil wells and with further Scud attacks as the Iraqi army retreated in the face of overwhelming coalition forces. Air attacks on withdrawing Iraqi forces along the Basra road represented the final stage of the ground war. The Seminar discussed whether the Iraqi ignition of Kuwaiti oil wells was a surprise and

whether the comparative lack of resistance experienced in the 100 hours had been expected, and to what extent the images of destruction on the Basra highway were significant in terms of strategic decision-making. The question of how to ensure the safe treatment of large numbers of Iraqi prisoners was also addressed, along with the degree of the seriousness attached to discussions of marching on Baghdad.

Aftermath of the Conflict

Offensive Coalition operations were suspended on 27 February 1991 with the liberation of Kuwait, while the British Ambassador to Kuwait, Michael Reston, returned to the country to reopen the British Embassy after the site was secured by members of the Special Boat Service delivered by RAF Chinook helicopters. On 1 March, cease-fire terms were negotiated and there was speculation about the future of Saddam Hussein and what would happen internally within Iraq. In response to the challenge posed by the Shia and Kurdish rebellions, Iraq soon broke the terms of the truce and the USAF shot down an Iraqi Su-22 in response on 20 March. Two days later, another Su-22 was shot down by a USAF F-15, while the pilot of an Iraqi PC-7 being used in the attack role ejected as USAF fighters approached his aircraft.

On 3 April, UNSCR 687 set out the terms for the formal cease-fire which Saddam Hussein accepted three days later. Over 1 million Shia and Kurdish refugees created a serious problem for the international community, leading to John Major launching his Safe Havens initiative on 8 April 1991. The Seminar discussed British policy at the point of conflict termination and the importance of returning Kuwait to normal as soon as possible. The participants moved on to consider the British view of the potential prosecution of Saddam Hussein for war crimes, and views on what Saddam Hussein would do next, specifically in relation to the Kurds and Sh'ites, before addressing concerns with the refugees fleeing to Iran and Turkey and the response through Major's 'Safe Havens' initiative.

British and American support for the safe haven policy and the policing of no-fly zones over northern and southern Iraq saw the commitment of those two nations' forces from April 1991 to 2003, a deployment ended only with the launching of Operation IRAQI FREEDOM.

The Seminar concluded by discussing how near Saddam Hussein's strategy of seeking to divide and rule the international community during the 1991-2003 period came to succeeding and whether or not the survival of the Saddam Hussein regime represented 'unfinished business'. The impact of the conflict on Britain's status and reputation while considering issues such as the effect of the war on the implementation of the *Options for Change* defence review, and what could be learned about Britain's armed forces in the post-Cold War era, as well as looking at the results of the conflict for British policy in the Middle East and the wider Middle East peace process.

As can be seen, the 1991 Gulf War was a complex affair with a number of lasting effects. It was seen as a successful mobilisation of the international community and the UN, while being

represented as a British success in large-scale conventional conflict which, commentators such as Colin McInnes suggest, allowed Britain to 'punch above its weight' diplomatically.⁷ The Seminar thus provided an opportunity to consider an array of matters as they were perceived by key participants, and the transcript, published here for the first time, offers some fascinating insights into the Conflict as well as some correctives to aspects of the popular narrative which became established in the aftermath of the war and which, perhaps surprisingly, have undergone little modification until now.

Notes

¹ For example: General Sir Peter de la Billière, *Storm Command: a Personal Account of the Gulf War* (London: Harper Collins, 1992); Charles Allan, *Thunder and Lightning: The RAF in the Gulf – Personal Experiences of War* (London: Stationery Office Books, 1991); John Peters and John Nichol, *Tornado Down* (London: Michael Joseph, 1992); 'Andy McNab', *Bravo Two Zero* (London: Bantam Press, 1993); Brigadier Patrick Cordingley, *In the Eye of the Storm: Commanding the Desert Rats in the Gulf War* (London: Hodder & Stoughton, 1996); Lord Hannay, *New World Disorder: The UN After the Cold War – an Insider's View* (London: I B Tauris, 2008).

² Lawrence Freedman and Efraim Karsh quoting John Sullivan in the Independent on Sunday, *The Gulf Conflict 1990-1991*, London 1993, p. 111.

³ Farzad Bazoft, a freelance reporter who had lived in Britain since the age of 16, had been investigating a story about Iraqi missile capability for *The Observer* newspaper, and was arrested by the Iraqi police as he awaited a flight to London. Coerced into a public admission of guilt, he was convicted of espionage in 1989 and hanged in March 1990.

⁴ Lawrence Freedman and Efraim Karsh, *The Gulf Conflict 1990-1991*, London 1993, p. 112.

⁵ C.f. Lawrence Freedman and Efraim Karsh, *The Gulf Conflict 1990-1991*, London 1993, p. 228.

⁶ Dan Keohane, 'British Policy in the Conflict, in Alex Danchev and Dan Keohane (eds.), *International Perspectives on the Gulf Conflict, 1990-1991* (Basingstoke, 1994), p.162.

⁷ Colin McInnes, 'The Gulf War, 1990-1', in Hew Strachan (ed.), *Big Wars and Small Wars: the British army and the lessons of war in the twentieth century*, (London, 2006), p. 163.

Table of Witnesses and their Positions in 1991
(in alphabetical order)

Witness	Position in 1991
Professor Gordon Barrass	Joint Intelligence Committee
General Sir Peter de la Billière KCB KBE DSO MC DL	Commander British Forces, Middle East 1990-91
Field Marshal Sir John Chapple GCB CBE DL	Chief of the General Staff
Captain Chris Craig CB DSC	Senior Naval Officer Middle East, December 1990-March 1991
Major General Patrick Cordingley DSO	Commander 7th Armoured Brigade
The Right Honourable Lord Hamilton of Epsom PC	Minister of the Armed Forces
Lord Hannay of Chiswick GCMG CH	Britain's Permanent Representative to the UN (September 1990)
Marshal of the RAF Sir Peter Harding GCB FRAeS	Chief of the Air Staff
Air Chief Marshal Sir Patrick Hine GCB GBE	Joint Commander British Forces
Air Chief Marshal Sir Richard Johns GCB KCVO CBE FRAeS	HQ Strike Command, 1989-91; AOC No 1 Gp, 1991-93
Air Marshal Ian Macfadyen CB OBE FRAeS	COS, then Commander HQ British Forces Middle East, Riyadh, 1990-1991
Major General Mungo Melvin OBE	Headquarters 1st (United Kingdom) Armoured Division (SO2 G3 (Plans))
Sir Alan Munro KCMG	HM Ambassador to Saudi Arabia
Admiral of the Fleet, Sir Julian Oswald GCB	First Sea Lord
Lord Powell of Bayswater KCMG OBE	Private Secretary to the Prime Minister
General Sir Rupert Smith KCB DSO OBE QGM	Commander 1st Armoured Division, 1990-92
Sir Harold Walker KCMG	HM Ambassador to Iraq
Sir Michael Weston KCMG CVO JP	HM Ambassador to Kuwait
Rear Admiral Philip Wilcocks CB DSC	Commander HMS Gloucester
Air Chief Marshal Sir William Wratten GBE CB AFC	AOC No 11 Group, 1989-91; Air Commander British Forces Middle East and Deputy to the Commander, November 1990 to March 1991

Britain and the 1991 Gulf War Witness Seminar

16 March 2011

Cormorant Hall, JSCSC, Shrivenham, Wiltshire

Session 1:

11:30-12:45: Origins of the Conflict up to Desert Shield

Air Vice-Marshal Ray Lock (Commandant, JSCSC): Ladies and gentlemen, good morning. I am Air Vice-Marshal Ray Lock. I am the Commandant of the Joint Services Command and Staff College, which is where you are this morning, and it is my great pleasure to welcome witnesses and delegates to this witness seminar.

It is not my intention to eat into anyone's time, but just a couple of minutes by way of introduction if I may: on 27 February 1991, I spent four hours that morning sitting in my Tornado, in cloud, headed up towards an airfield called Al Taqaddum, just to the west of Baghdad, to destroy a hangar. For one minute of that sortie, miraculously, the clouds parted, and we were able, with the help of a Buccaneer, to destroy said hangar. For much of my generation, that was our first proper foray into war, and it has very much set the tone for the decades that followed.

In fact, it is remarkable to note that, 10 years after the ceasefire, Prince Philip¹ opened the Staff College here. The Joint College has, of course, very much been one of the children of the First Gulf War; the other one, of course, being the Permanent Joint Headquarters. I have just come – 10 minutes ago – from a briefing by its staff on what we are doing now in terms of Libya, Bahrain and Yemen, and all the other places. So the pull through for me from the First Gulf War is very clear, and it is something that we speak about every day here in the College, as we educate our young men and women for the future. That is why I am absolutely delighted that we can capture the strategic and military strategic background to the Gulf War, because I believe that is essential to our current and, indeed, future operations. This is an appropriate place to do that, and I welcome back many people whose names I saw in the newspapers at the time but, frankly, whom I knew little of, as I departed the Sheraton in Bahrain every day to fly combat missions over Iraq. That is another story, not perhaps for today, I dare say.

On the witness seminars, we are very lucky to have Dr Rob Johnston to lead us through today from the Faculty of History at Oxford. Rob is a Deputy Director of the Changing Character of

Warfare Programme [at the University of Oxford]. Thank you very much indeed. The witness seminar today is very much about our expert witnesses, providing their perspective.

Of course, one should reflect that a number of my colleagues – our comrades – lost their lives in 1991. We remember their sacrifice, but we are here today to hear from the strategic end of what went on in the 1991 Gulf War. King's College London are running the seminar today. The Staff College enjoys a close partnership with King's College London, so without any further ado, let me hand over to Rob.

Dr Robert Johnson (Chair): Thank you very much indeed. I hope that you can all hear me very well. I will first run through a few administrative issues to help you and the witnesses frame the discussions. It is very important to note that this seminar will be recorded, transcribed and archived. Therefore, everything that is said will be attributed and on the record. This is not a Chatham House scheme.

The first part of the day, Session 1, will be very much a discussion of the origins of the war, up to – using the American expression – DESERT SHIELD. It is very important to note that we will try to acknowledge the fact that, long before the land component and the air-land battle got under way, there was already a significant air and naval campaign going on.

I will ask each of the people who make witness statements, first, to announce themselves at the start of the day, to give us an idea of the role that they were fulfilling at the time of the conflict or just before.

I want to thank the Commandant for his comments and his warm welcome, the College for providing this facility and, indeed, the British Academy for generously funding this event, as well as those members of King's College and, indeed, this College who have so generously helped us out for getting this thing under way.

After a few opening remarks, I hope simply to field each of the speakers. Let us go back to 02.00 on 2 August 1990 and the Iraqi invasion of Kuwait, which many people have posited was something of a surprise – itself a controversial point. Sheikh Jaber Al-Ahmad Al-Jaber Al-Sabah² made his escape. Unfortunately, his brother was not so lucky. There was certainly a great deal of uncertainty about the next moves that Iraq and particularly Saddam Hussein might take, and a great deal of uncertainty about the course of action that should be followed: sanctions, force, by what authority, which allies and what of Arab opinion.

There was, of course, then the decision to establish DESERT SHIELD and the deployment of considerable and overwhelming force against an Iraqi army that at the time numbered 540,000, which was very battle-hardened and experienced, and no one quite knew what sort of entity we were dealing with. We were then faced with the issue of an Iraqi Scud missile offensive and whether the Israeli-Palestine question would blow up in our faces as the war seemed to start

to unfold. There were gradual but intensive diplomatic moves towards the liberation of Kuwait – although, again, that was not given at the beginning of the crisis – which ended with the UN deadline of 15 January 1991, under UN Security Council Resolution 678.³ Saddam hoped for a protracted struggle and the reunification of Arab opinion against Israel and the West, and that was something that had to be borne in mind as the air operations began to intensify.

The Air campaign has been seen as largely successful. But of course, one of the great things about doing a historical study in a reflective move like this is that we have the opportunity to go back to the decisions, the contingencies and the questions that were in the minds of the commanders and decision makers of the day. It is all very well studying the historical record as things actually happened—'*Wie es eigentlich gewesen*',⁴ as Leopold von Ranke⁵ would have said – but what we are interested in today is some of the considerations, concerns and anxieties of those decision makers.

The war followed, with overwhelming fire power demonstrated by the Western forces, with new precision weapons, with new media coverage and with the consideration, of course, of the security of energy supply and the domination of the waters of the Gulf. There were questions of how or when to stop the war, how to avoid civilian casualties, particularly against human shields, and how much or how little to manage the media. The DESERT SABRE operations – the 100-hour war, as it is known – was immensely successful, crushing, and an indictment perhaps of the veracity and importance of manoeuvrist warfare, but the Basra Road destruction led to an eagerness to end the war by particular political masters.

Did we achieve our war aims? Did we achieve them by 1991; or were they achieved later? Was this the last of the industrial wars; or was this the first of the post-modern wars and a glimpse into the warfare of the later twenty-first century? We had decisive military operations, but a very uncertain peace followed. I think that this will be an opportunity for us all to reflect, amplify and discuss the contingencies and concerns of the day and to get at the story underneath the narratives that are already in the literature and the scholarship. It is important, of course, to note finally that, while the conflict of 2003 is in our minds, which is probably a debate for another day, I am sure that the present will bleed into the past and our reflections on it, but I think that we need to move fairly swiftly and discuss, as our primary consideration today, the conflict of 1990 to 1991.

If we are going right back to the origins of the crisis, we perhaps need to go back even a little further than that. So I will call upon speakers to address particular questions; but of course, there will be interjections, and I will keep my eyes open here on the panel for those who wish to make other additional remarks.

I think that the first question that we should consider is the extent to which British policy towards Iraq in the 1970s and 1980s encouraged Saddam Hussein to believe that particularly Britain would regard his territorial ambitions towards Kuwait with any leniency or licence.

To get us started on this, perhaps I can call upon Sir Harold Walker and Professor Gordon Barrass to make some reflective remarks about that 1970s and 1980s period.

Sir Harold Walker: My name is Hooky Walker. I was briefly Ambassador in Iraq from February 1990 to January 1991. I do not think that British policy would have encouraged Saddam to think that he could walk into Kuwait without reaction, because, after all, we had defended Kuwait as long ago as 1961 and we had a long history of protecting the Gulf States. However, I have to say that, in the immediate lead-up to the war, what seemed to be on the mind of British decision makers more than anything else was trade.

My memory is not good, but my memory of my briefings pre-February 1990 on going to Iraq supports one of the statements in the pieces of paper that we were supplied with before this seminar – namely, ‘Britain wanted to restore positive dialogue in the months preceding the invasion’. My briefing before I was appointed amounted to my being told the following: ‘Anglo-Iraqi relations are always rocky. Your job is to keep them sufficiently calm for us to conduct profitable trade’. That was the sum of my briefing.

The Foreign Office had in mind a graduated series of ministerial visits to build up the prospect of trade. I do not think that we had any plan laid out in detail; but in general, the idea was that, after a while, a junior Minister should visit Baghdad. Then there would be a visit by Ted Heath⁶, who was already keen to go. If all went well, that would lead up to a ministerial visit of Cabinet rank. So, from my perspective, we were thinking more of trade than security and politics at the time when I was briefed to go to Baghdad.

Dr Robert Johnson: Thank you. Just before we proceed, is it possible to turn up the volume just a little for some of the speakers – years are going on for some of us? Thank you.

Professor Gordon Barrass: Could I just give you a perspective from how it looked from the Joint Intelligence Committee (JIC), as we approached the invasion of Kuwait? As you will see from your notes, on 25 July, Saddam had summoned the American Ambassador⁷ to a meeting to hold comprehensive political discussions. The Middle East Current Intelligence Group met that day and prepared a paper saying that Saddam was stepping up the pressure on Kuwait. Before that paper was drafted, I consulted the FCO Head of Middle Eastern Department who looked after the region, and I said that there was growing concern in the defence intelligence sector that there was a build-up of Iraqi forces and we should really take this very seriously.

The Under-Secretary’s response was that the word had come back from King Fahd,⁸ from King Hussein of Jordan⁹ and from Mubarak¹⁰ that basically what Saddam was doing was playing games and that this was to build up the pressure but there would be a settlement: after all, these people had known Saddam for 20 or 30 years. So the paper basically said that was the background: he wanted to step up pressure, but there was in the longer term the risk of an attack on Kuwait.

The next day, the Joint Intelligence Committee met, and as was its custom, it reviewed the current intelligence papers that had been produced between the two sessions. Its view was rather more pessimistic, because already further evidence had been passed on by defence intelligence that the forces were building up near Kuwait. On the Friday, Sir Percy Cradock,¹¹ the Chairman of the JIC, as was customary, wrote a note to the Prime Minister about the JIC's deliberations. He was of the view that we really did face the prospect of a war over Kuwait, and he wanted the Prime Minister to urge European leaders and the Americans to take a collective, firm stance. At the time, the Prime Minister was just embarking on her travels – perhaps Charles Powell can say something about that in a moment – but the piece of paper did not catch up with her until she was close to seeing President Bush¹² in Colorado on 2 August, which just happened to be immediately after the invasion had taken place.

In the period towards the invasion, the Ministry of Defence was becoming increasingly concerned that there would be an invasion. On the day of 1 August, it issued a warning that it thought that was likely. This warning, for reasons that remain unclear, but it was not on the MOD side, did not really get through into the JIC system, and by the time that the word was hoisted in, it was too late.

The next day, I had a meeting with Percy Cradock and one of my other colleagues in the JIC, and he was asking us what sort of action could be taken. At that stage, the first concrete idea that we came up with was a naval blockade, and that was something that began to work its way through the system.

Dr Robert Johnson: Thank you very much. Before we move essentially to Lord Powell and his comments on what the Government were going to do about this, may I ask the ambassadorial figures here, particularly Sir Alan Munro, to give us some indication of how well we understood the motivations that lay behind this man, Saddam, since this was a system that very much depended on him as a decision maker? What was the view essentially of the prospect of a crisis, which appeared to be blowing over by the late summer anyway, taken by the ambassadorial figures?

Sir Alan Munro: I can look at this from two successive appointments, because I was the Deputy Under-Secretary at the Foreign Office responsible for the Middle East from 1986 until 1989, during much of the prelude period, which included the Halabja gas outrage on the Kurds.¹³ I have to say that we were not soft politically on Saddam at any point during this time. In fact, we did, whatever others might try to tell us subsequently, impose a rigorous weaponry – military equipment of all kinds by then, not just offensive weaponry – embargo, unlike certain others, notably the French and the Soviets, at this time. That certainly riled the Iraqis, who were very anxious to have access to some British equipment.

Dropping back a moment, I remember 10 years earlier, when I was at the Ministry of Defence and looking after our military equipment, collaboration and sales to the whole Arab world,

Saddam Hussein, in about 1981, sent an armoured corps general over to see us who over supper staggered me by saying, 'What we want you to do, please, is to reopen the production line for the Churchill tank flamethrower'.¹⁴ Well, we got through dinner somehow, my having pointed out that sort of weaponry did not really figure on anyone's sheets anymore and certainly should not, but when I asked the Royal Ordnance Factory, just out of interest, it said, 'Oh, yes, delighted; we've still got the jigs'. But there we are – those were good industrial days.

That said, we were not soft, but we were spurred on, as Hooky says, to maximise our trade. Someone who had a lot to do with this and various affairs during that time was called Alan Clark.¹⁵ He was certainly a great proponent of maximising our very valuable trade with the Iraqis, but it did not include the defence sector.

The other point to bring in here is that, in the late 1980s, our attention was focused on what we saw as the major threat, shared indeed with our American partners: Iran. Our eyes were on the menace of Iran in one form or other, which tended, if you do not have the resources maybe to scrutinise two enemies at the same time, to take our eyes off Iraq. Once I got out to Saudi Arabia in 1989 and early 1990, and we had all the build-up and the tension, personally I was indeed very worried that, as this built up in those early spring months, it went beyond sabre rattling, but I was constantly assured by senior Saudis, ministerial and official, 'Look, this has got to be sabre rattling; we know our man; he'll be bought off eventually. The Kuwaitis aren't being awfully clever' – indeed they were not and had been provocative – 'but it will be bought off. Above all else, look at the Arab League charter: Arabs do not attack each other. They never have. Israel is our target, and we do not attack each other, even if we threaten each other'. So that was how we saw it, right up until the last moment.

Sir Harold Walker: Before we move on to any next stage, I think that we need to add a rider to this view that Arab states do not attack each other, or the way that we accepted that view. It is set out very well in one of the papers that we were supplied with by Alex Danchev and Dan Keohane.¹⁶ A factor in our judgment at the time was that the judgment of Arab leaders was that a military attack was unlikely. Now, the supposition on our part that primarily the Egyptian Government and also other Arab governments would be better able than ourselves to judge Iraqi intentions was due, I say now with of course hindsight, to an insufficiently rigorous assessment on our part of the then nature of the Arab world.

Arabists, like myself, ought to have made an assessment that, although there were and, indeed, still are commonalities across the Arab world, the Arab countries since the Second World War had developed individually to the point at which it was no longer correct to assume that one Arab country would not attack another and, similarly, that it was no longer wise to assume that one Arab government – the Egyptians or whoever – would necessarily make better judgments about the behaviour of another Arab government than we could.

I may say that later on I pointed out that, in my judgment, there was an element of brutality in the Iraqi system that did not exist or was rare in the rest of the Arab world. I was taken to task for that judgment by the late and great Fred Halliday,¹⁷ but I think that I was correct – of course, much too late. So I think that there was, in my case and in the general international disposition, a tendency to be out of date in judging the Arab scene. We thought that the Arabs behaved in a certain way, which indeed they had done in the past, but if our thinking had been really more rigorous, we would have said that that was no longer true and that, when you see an army on the border of somewhere with the equipment to invade – well, if it looks like a duck and quacks like a duck, it probably is a duck. I know that this is partly hindsight; none the less, I feel in my case that more rigorous thinking would have produced an early warning for HMG that Saddam might indeed invade.

Sir Michael Weston: I was Ambassador in Kuwait at the time. I had been in Kuwait for only four or five months. It had been a period when there was a lot of tension over the border issue, and the Kuwaitis were engaged, as you all know, in discussions of that. What they were saying to me was, 'We need not worry. We know the Iraqis better than anyone. Moreover, the Iraqis are dependent on support from their fellow Arabs, and they all tell us that this is only sabre rattling and that we really need not worry'.

Of course, when it came to 2 August, the Kuwaitis were totally unprepared. They did not believe that there would be a military attack, but that if there were an attack, contrary to their belief, it would stop at the Mutla Ridge, north of Kuwait City, so that Saddam would be able to capture the oilfields, which he claimed and which straddled the border and which Saddam claimed the Kuwaitis were draining at the expense of Iraq.

My only contribution, I think, following Hooky's line rather, is that somehow we attributed too much logic to Saddam and his position, because had he indeed stopped north of Kuwait City, my own view is that it would have been very difficult indeed to get him out again. It would have been virtually impossible to get the international consensus, which was obtained, together to get him back just a short distance. That certainly was the Kuwaiti view. The worst case, so far as they were concerned, was that they might lose a bit of the northern oilfield; that was all.

Lord Hamilton of Epsom: Archie Hamilton, Minister for the Armed Forces at the time of the Gulf War. Before we leave the subject of Alan Clark, I think that we ought to examine his role rather more closely. He was Minister for Trade and moved subsequently to become Minister for Defence Procurement in the Ministry of Defence at the time of the Gulf War. When he was Minister for Trade, he was extremely enthusiastic to sell everything to the Iraqis that they could possibly ask for.

I remember at one stage the telephone rang. Alan Clark was on the other end and said, 'Archie' – in his drawling voice – 'your people are being very difficult about the sale of 5,000 rubber boats to the Iraqis'. I had not been aware of the fact that the Ministry of Defence had been

trying to block it, but it seemed to me to be eminently sensible so I said to him, 'Well, Alan, is it not likely that Saddam Hussein will use them against the Marsh Arabs in the south-east of his country?', to which he said, 'Well, we don't know that, do we?' So I said, 'We've got a pretty good idea, I think'.

Alan did play an absolutely pivotal role in trying to supply the Iraqis with almost anything that they wanted. Of course, basically, he played a pivotal role in the whole arms to Iraq scandal by nodding and winking to people who wanted to sell arms to Iraq, because his view was that the more damage Iraq could do to Iran the better and we should not be too squeamish about dictators. He was one of those extraordinarily unique Ministers who seemed to think that he did not need to be too tightly held by what was clear Government policy at the time. Of course, during his time at the Ministry of Defence, he found it necessary to write his own defence review, which he managed to get to the Prime Minister, although those enthusiasts who read his brilliantly written diaries would have noticed that he did not actually spell out what was in his defence review. But Alan, I think, was incredibly damaging at that stage and did play quite a big role in presumably giving quite a bit of reassurance to Saddam Hussein, which he did not deserve to have.

Dr Robert Johnson: Perhaps that is an important reminder of the nexus between domestic politics and the international environment. In terms of understanding the considerations regarding the Arab world, I wonder whether we might get the opinion of the UN.

Lord Hannay of Chiswick: David Hannay; I got to the UN at the beginning of September, one month after the invasion of Kuwait, and by that time the initial decisions had been taken and that included both very strong legal action proclaiming Saddam's seizure of Kuwait as illegal, null and void, and far the biggest economic sanctions package that the UN had ever contemplated, let alone implemented. By the end of August, the crucial decision had also been taken that force could be used to prevent Iraq from getting around the sanctions. The wording was a little obscure, but the practice was not obscure, and at that point, pretty well all Iraqi legitimate external trade ceased, which was, of course, mainly external trade in oil, because there was not much else.

The policy until the end of October remained broadly one of tightening the screws of sanctions, so that in September there followed a resolution that cut Iraq off from all air transport and air cargo. Then there was a final turn of the sanctions screw in October, when some other bits and pieces were swept up. By that time, it was clearly understood at the UN that there was nothing much left in the sanctions rung of the ladder. It is always important to remember that sanctions are not an end in themselves; they are a step on a ladder between diplomatic persuasion and, above them the use of force. So it was realised by the end of October that it had run its course and had not produced any correction in Iraqi policy at all, which is why the whole Western response, particularly that of the US, the UK and, subsequently, France, shifted gear at about the end of October, because there was nothing left in the barrel to take out.

One other point to make about that period was that it was the time when the greatest fragility was shown in the coalition because of the Israeli killing of about 15 to 20 Palestinians on the Temple Mount, or the Haram al-Sharif, Jerusalem, when there had been some fairly normal, by subsequent standards, rioting. The Israelis opened fire with live ammunition and killed quite a lot of Arabs. That caused an enormous shockwave, as you might expect, and it did put at risk the Arab members of the coalition if we had not found a unanimous Security Council response which we did. It required the Americans through gritted teeth to condemn the action taken by Israel and to support the dispatch of a UN fact-finding mission, which was never admitted to Israel, in fact, and a really tough resolution of a sort that either before or since would not have passed. It only passed because the Americans understood that it was a necessary condition for keeping the coalition together.

A final point: at this period, of course, thought had been given about what the next stage should be if all the sanctions that we threw at Saddam were not going to bring about a change of policy. That consideration began broadly about the end of September and continued through October, but did not surface at that stage because the US was in the middle of the mid-term elections, which the president's party did pretty badly in, and did not wish any distraction by talk about the use of force to expel Saddam from Kuwait.

The diplomatic preparatory work, however, started at that stage, and there was distinct tension between ourselves and the Americans, because the Prime Minister took the view that we did not need any further UN authority to help the Kuwaitis to expel Saddam from their country. There was no doubt at all that was a correct reading of Article 51 of the Charter, which speaks about your right to act in self-defence, together with your allies if you so wish. But the Americans were more interested not in the legality but in the legitimacy of the use of force, and on that point, they had already begun to come to the conclusion that, to get a pretty unwilling Congress to vote in favour of the use of force, they needed a UN resolution. They had also come to the conclusion, correctly, and based very much on something that the Soviet Foreign Minister¹⁸ said at the General Assembly in September, that the Russians would not have undue problems; and they were fairly sure that in those circumstances the Chinese would just look out the window and would not use a veto.

So the American preference for going back to the United Nations for a resolution authorising the use of force against Saddam carried the day and the main theme of activity in November up to the passage of Resolution 678 at the end of November,¹⁹ was already known to us in September and October, but there were tensions between the Prime Minister's view in Downing Street and the emerging view of Bush, Baker²⁰ and Scowcroft.²¹

Dr Robert Johnson: Thank you very much. We will come back to the questions about the passage of those resolutions in a moment, but let us go back to the Cabinet view, with Lord Powell.

Lord Powell of Bayswater: I was the Prime Minister's Private Secretary at No 10 Downing Street throughout this period. Indeed, since 1983 I had been responsible particularly for foreign affairs and defence. I will try to look at matters from Margaret Thatcher's point of view – not my own, which is of limited interest. We can start with the question of perspective. What you have assembled today is a great deal of Foreign Office expertise on the Middle East and people who were working on it and had been for years and also those who commanded our forces and who have great military expertise focused on defending Britain and fighting wars. From the centre of the Government, it all looked rather different. We were weighing up much broader factors and dealing with a much wider range of issues.

Just to remind you, at the time of July/August and Saddam's invasion of Kuwait, we were still in the throes of trying to sort out German unification.²² We were still running up to the end of the Cold War, the great conference in Paris in November that year, which really marked the end of the Cold War. In domestic politics, there was a huge row going on about the poll tax. I want to call it the community charge, of course, but I shall settle for the 'poll tax'.²³ There was a major dispute within the Government about joining the Exchange Rate Mechanism. Those were the matters that were preoccupying Margaret Thatcher. The Middle East was, of course, important, but it was not particularly high on the radar screen in June/July of that year.

It so happened that, at the end of July/beginning of August, I had actually – the only time during my years at Downing Street – persuaded Margaret Thatcher to take a holiday. It was to be in Aspen, Colorado. It was a characteristic Thatcher holiday. She would have a meeting with President Bush, would give a major speech, visit the headquarters of Strategic Air Command, speak at the Aspen Physicists Conference and visit a major environmental laboratory in Denver, all in the space of three days – the sort of holiday that most of us enjoy. Of course, it did turn out to be fortuitous, a point that I shall come on to.

Had we had a strong intelligence warning that a conflict was imminent, I wonder whether we would have gone. I think that we might have still gone, because it would have been the right thing to do, but the JIC assessment was, as always, extremely balanced. It listed all the factors, and it gave great weight to the assurances from President Mubarak and other Arab leaders that Saddam was all a bluff. He was going to be negotiating; it would all be settled and not to worry. Someone has just made the valid point that if a country's tanks are all close to a border and facing the direction of advance, you probably should take that rather seriously.

Nonetheless, we thought that the situation was all right and that it was sufficiently stable for Margaret Thatcher to go America. We were reinforced in that view by the Americans who were equally unclear as to what would happen. I should point out that I had a telephone on my desk, which was a direct link to General Scowcroft, the President's National Security Adviser – a link that was often used several times a day. So it was easy to know what was in the Americans' minds.

We had set off to America on 1 August, gone through Washington and had just landed at Aspen and were driving from the airport to the ranch where Margaret Thatcher would stay when General Scowcroft rang to tell me the news that Saddam Hussein's tanks had just crossed the Kuwait border. My first question to him was, 'Will the President still come out to Aspen tomorrow as planned to meet Margaret Thatcher and give his speech?' He said, 'I honestly don't know. We will think about it and come back to you'. I said that I really thought he should because nothing will be more important than the two of them to be together in response to the situation. President Bush did indeed reach the right decision. He came out the next day and had a meeting with Margaret Thatcher at which the whole line of the subsequent Gulf conflict was set.

It is sometimes said that was the stage when Margaret Thatcher said, 'George, this is no time to go wobbly'.²⁴ That is completely untrue. She did say that to him some weeks later in connection with stopping ships in the Indian Ocean, but at the time of their meeting that day, they were equally robust, both of them. Margaret Thatcher's approach was quite easy to understand. It was strongly conditioned by the Falklands conflict. She believed in standing up to dictators and that we should never back down in the face of them. She had no inhibitions about believing that we should be part of a military action to stop Saddam Hussein.

Secondly, Margaret Thatcher had huge respect and admiration for our military and believed that they were capable of conquering the world. Perhaps they were, but luckily we didn't have to find out. She knew that she had available to her Armed Forces that could make a major contribution to stopping Saddam. Thirdly, she had a very clear understanding of the strategic importance of the Gulf. Her biggest concern at the time was not really with Kuwait, but whether Iraqi Forces would go straight through Kuwait and advance on to and into Saudi Arabia.

In her mind also was another factor: she wanted to demonstrate to President Bush that Britain really counted still. There is a bit of a background to that. She had been particularly close to President Reagan.²⁵ He had talked to her about almost everything, her view frequently prevailed with him. When President Bush came into office, his advisers believed that the US had tilted a bit too far towards Britain, that it was time to rebalance the relationship a bit, and pay more attention to France and Germany, and give others a chance as it were. Margaret Thatcher was aware of that. Indeed, I remember talking to her about it, and shortly after President Bush was elected she said, 'Charles, don't worry about it. The Americans will soon find out who their real friends are'. Indeed, she saw the Gulf situation as a prime opportunity to demonstrate to the Americans who their true friends were. She and George Bush really approached the matter on the same basis of immediate resistance to Saddam Hussein. If you read Margaret Thatcher's memoirs, she has the phrase, 'I never found any weakness in George Bush from the start'. They really were of one mind. They gave their joint press conference that morning, where they said, 'This invasion shall not stand', and that really set the tone for the whole of the subsequent six months and more.

If there were any intelligence failures, I suspect that they belonged to Saddam Hussein. It was perfectly common knowledge that Bush and Thatcher would meet on 2 August, and it was not exactly a very intelligent time to choose to invade Kuwait. Probably his intelligence failure outweighed any failure on our part. I must be careful how I say this, but the fact that the US President and the British Prime Minister were together, Margaret Thatcher with her longer experience of being a head of Government than George Bush, probably accelerated the moment when the President took the decision that the invasion must not stand. Would he have reached that conclusion quite as rapidly if they had not been there together? I am not sure. In that sense, the meeting was extremely important and influential.

I will just add two or three more points. It is important to note that, at no stage from the very beginning onwards, was bringing down Saddam Hussein an objective. Margaret Thatcher and George Bush never said to each other at the first meeting or indeed at any subsequent meeting, 'We've really got to get rid of this guy. He's a menace. He must go'. It was only cast in terms of getting him out of Kuwait, defeating him and stopping him getting to Saudi Arabia. Anything said subsequently about that, including things said subsequently by Margaret Thatcher, have no historical basis. It was never an aim to get rid of Saddam Hussein.

We have to remember the end of the Cold War context. It was really the first test of Western resolve since the end of the Cold War. It was important that the West should not be found wanting. The enemy was, of course, different from the one that we had planned for. Nonetheless the test of wills was important and that, too, was very clear to both Margaret Thatcher and George Bush at the time. On the historical side, they met that day in Aspen. George Bush flew back to Washington. Margaret Thatcher joined him there three or four days later. They met in the Oval Office and confirmed everything that they had said at their first meeting in Aspen. They heard the first results of Secretary Cheney's²⁶ visit to Saudi Arabia, the agreement of the King that American Forces could start to be deployed there. But they also had their first disagreement, to which David Hannay has referred.

As for my perspective on that disagreement, obviously it was important at the very beginning to get the UN to act, to demand Saddam Hussein's withdrawal and to start to impose sanctions. From the first, Margaret Thatcher took the view that any action to get Saddam Hussein out of Kuwait should be under Article 51 of the UN Charter: the Right to Self-Defence. She argued that point with George Bush and Jim Baker that first day in Washington and many times subsequently. She never thought that sanctions would work. They were useful. They were important, but she never thought that they were going to work. On that, she was in contrast to Douglas Hurd,²⁷ who was convinced at the time – and had said in his memoirs – that they would work.

Margaret Thatcher thought it a mistake not to use Article 51, the Right to Self-Defence, on a number of grounds. First, if you did not use it, it would suggest that sovereign states did not have the authority to act on their own behalf, but had to go to the UN for permission to act.

Secondly, she thought that, if you could achieve an objective without UN authority, why seek it at the risk you would not get the resolutions you wanted? Thirdly and linked to that, she feared that a UN resolution would tie our hands unnecessarily. At the beginning, George Bush was perhaps less focused on getting UN authority than James Baker: for him and certainly Brent Scowcroft, it was primarily a matter of congressional support.

There was never any real problem with the British Parliament about going to war to get Saddam Hussein out of Kuwait. There were debates in early September, again in January the following year. On each occasion, the majorities in favour of action were massive. At the US Congress, it was an entirely different picture. George Bush did not know whether he would get a majority in Congress. He did not even try to test it until very, very late in the day, and when he did – you will all remember – it was a very slim majority in the US Senate, three or four votes from memory. That gave Margaret Thatcher great leeway, which President Bush and Secretary Baker did not have. Frankly, she did not worry much about the parliamentary aspects. Insofar as the British politics of it all concerned her, she was very fed up with Ted Heath's activities, which she saw as consorting with the enemy. She did not mind who knew that was her view. She was very fed up with one or two others, such as Denis Healey²⁸ who was preaching gloom and disaster and saying that it would be a frightful conflict with tens of thousands of British casualties. However, essentially, she had a pretty free hand in our politics.

Dr Robert Johnson: On the issue of balancing UK interests with those of our allies, we have mentioned Europe, the United States and the Arab world. Does Lord Hannay wish to respond to what the situation looked like on the other side of the Atlantic in trying to balance the national interests and how problematic it might have made his work in terms of getting resolutions and some understanding in the Security Council of what UK interests really were?

Lord Hannay of Chiswick: The task of getting resolutions at the Security Council on the issue was less than it would ever have been at any other time in the United Nations' history before or since, because we were in a state of grace as a result of the end of the Cold War and the weakening of the normal Soviet policy of simply mucking about if the West wanted to do something. The Chinese were still a power that was regional; they would get very excited about a resolution on Cambodia, but not very excited about a resolution on Kuwait or Bosnia. They were not at that stage in any sense a global power, although they had a veto on the Security Council.

As for the rest of UN opinion, there were any number of small states, countries such as Singapore, that were absolutely determined that tough action needed to be taken against Saddam. They realised that their own security in the post-Cold War world could very well crucially depend on whether the UN was able to reverse an open act of aggression such as had been committed. So we had a reasonably easy ride. That is not saying all that much because at the UN people always argue the toss about anything. But the majorities were always there, even though there was push back from groups of countries such as the Maghreb countries,

which did not share the views of some of the other Arabs who lived closer to Saddam. After all, the Maghreb countries would never be invaded by Saddam. There were thus some weak brethren, but they were always in a minority whether in the General Assembly or in the Security Council. When the Americans decided that they *were* going down the Security Council route to get the authorisation for the use of force, which, as Charles said, was not the view of the Prime Minister, although she conceded the point when it was put firmly to her at the beginning of November when Jim Baker came to London and said that it was the President's view, they then put on a diplomatic *tour de force* such as I certainly have never seen in which Baker travelled round the world and met pretty well every head of Government and Foreign Minister on the Security Council.

Tom Pickering,²⁹ the US representative and I, the British representative, had told Douglas Hurd and Jim Baker in early October that we thought that it was attainable now that it was clear that the Russians would not veto, as had been made pretty clear when Shevardnadze spoke at the General Assembly in September. We said that it could not be done in New York, but that it had to be done in capitals; it was too big an issue to be handled just by ambassadors in New York, particularly since some of the Security Council ambassadors had an extraordinary capacity to make up their own instructions as they went along. Baker took that seriously. He did his world tour. He got the votes necessary. One place that he did not visit, strangely enough, was Havana. At that time, the Cubans were on the Council but their vote did not matter! He did a brilliant operation, helped by us. But we were definitely playing second fiddle in the diplomatic negotiations that led up to the end of November, under US Presidency, to the voting of the authorisation for the use of force.

It was, of course, an astonishing resolution. It did not set up a UN military force to expel Saddam from Kuwait. No one in their wildest moments believed that could be done under the UN flag, even in the way that it had been done in Korea. It had to be done by a coalition of the willing, authorised by the Security Council. So that opened the door to a new chapter of UN history, in which there was another option between UN enforcement activity, which subsequently in Bosnia proved to be unrealistic, and doing nothing at all. That was the coalition of the willing, authorised by the UN at the end of November.

Dr Robert Johnson: Sir Alan Munro, would you talk about the coalition maintaining, particularly the Arab world coalition?

Sir Alan Munro: I can speak partly on behalf of Lord Wright,³⁰ who is unable to come. He was very much involved with the leading role played by the Foreign Office in such matters. The coalition was a very leaky bucket, as with other alliances under the United Nations. At its high point, remarkably there were 27 signed up members. A number of them had some form of military engagement and others had come up with financial support or one thing and another. There were also interesting ones who stood back. Nevertheless, holding all that together through the months of phoney war, while the process of 'Shall we turn the defence of

Saudi Arabia and the Lower Gulf into a liberation exercise?' was being debated, was a challenge. Much hesitation was shown by a number of our European partners, for example.

At one disgraceful point, the Belgians declined to supply ammunition to the British Forces. That was not a glorious moment in Belgium's inglorious history. We also had the French dissimulation. There was a great moment when I had a meeting with the EU ambassadors some time in November. My very boastful and tedious French colleague said to all of those gathered there, 'I wish you all to know – and Alan, in particular – that, as of today, there are more French troops than British in Saudi Arabia'. Bless him, the Italian looked at him and said, 'But Jacques, we don't know which way they're facing'. It was lovely, lovely.

The Saudis played a real role here, one that has not really been brought out in some of our material. King Fahd and Prince Saud³¹ indefatigably and with enormous resolve played an ingenious part. It was a mixture of arm twisting and financial inducement. The Soviets were only brought on side in the end by a massive loan through a Saudi bank to the declining Soviet Union. The Syrians were also paid to come, and the Egyptians had all their debts written off – by nearly all of us, frankly. The Egyptians came out of the war best financially, without any doubt. The Saudis managed to hold a very rag-tag coalition together. Some of the Western participants were perhaps the least willing at times. Oddly enough, the newly liberated Eastern Europeans were some of the most enthusiastic, but then they wanted to score and register themselves as part of the new world order. The Saudi part in all of this, which is somewhat discounted in the literature, was very important indeed. They will not write it up. It is not in their way, but it should be put on the record.

Dr Robert Johnson: As for how one influences, cash and other forms of diplomacy seem to go quite a long way. There are about 40 more questions that I could pose, but it is important to turn to the issue of force structures. I know that there are a lot of military and naval aviation people in the audience who want to know how it was done. I shall call on Lord Hamilton, Field Marshal Sir John Chapple and Admiral Sir Julian Oswald, in particular, to comment on the force structures that were being envisaged and say how they interpreted the intent of the Government, particularly Lord Hamilton from within the Government sphere, and explain the structures that were said and in what order that was done. Can I start with Lord Hamilton?

Lord Hamilton of Epsom: I wish that you did not start with me because, to be honest, when it comes to the important business of fighting wars, the military takes over – and that is the way that it should be. I had very little to do with gathering together the force structures and there are people here who did, so I much prefer to hear from them.

Air Chief Marshal Sir Patrick Hine: Can I set the scene before my single service colleagues comment from their perspective? I am Air Chief Marshal Sir Patrick Hine. I was the Joint Commander of all British Forces in Gulf War One. The military chain of command ran from CDS at the Ministry of Defence through myself, as Joint Commander in the Joint Headquarters at

High Wycombe and out to the Joint Force Commander in theatre in Riyadh. That was much the same C2 structure that we had used during the Falklands campaign in 1982.

The initial British force deployment was a Tornado F3 squadron at Dhahran in Saudi Arabia; a Jaguar Squadron at Thumrait in Oman supported by a couple of tankers; an extra frigate for the Armilla Patrol, and three Maritime Patrol Nimrods deployed to Seeb in Oman. The top priority very early on was to get sufficient military capability into theatre as quickly as possible to deter ideally, but if not deter, to repel an invasion by Saddam into the oil-rich, north-east part of Saudi Arabia. I first met General Norman Schwarzkopf,³² who was the overall Coalition Commander in theatre, towards the end of August 1990. I got to talking with him about what would be needed initially to repel any invasion of Saudi Arabia and, ultimately – it was always borne in mind – to drive Saddam and his Forces out of Kuwait.

Schwarzkopf's top priorities for further deployment by the UK were, first, armoured forces, because he wanted to put them with the US Marine Corps, who were lighter in armour in the north-east of Saudi Arabia. Secondly, he wanted the RAF to deploy Tornado GR1s equipped with the JP233 airfield denial weapon. Those were his top two priorities. It is worth saying at this stage that, when we discussed an operation to drive Saddam out of Kuwait, he said, 'If the President wants me to do that, I need sufficient resources here in theatre to do so with minimum risk in terms of allied casualties, particularly American casualties. I will never get all the ground forces that I think I really need for the job, so I will have to rely very heavily indeed on air forces – both land-based air forces and of course carrier-based air forces'.

There was at that time a stand-alone air campaign plan, should the Iraqis have invaded Saudi Arabia. It would have been initiated to get military action on the road and before sufficient ground forces were in theatre. Those were the initial requests from the American Commander in theatre. I relayed them back to the MOD about the end of August 1990. My Ministry of Defence colleagues might like to take up the story from their individual perspectives.

Dr Robert Johnson: It is only right that I ask the Senior Service next, so perhaps Admiral Sir Julian Oswald will comment on that interpretation of force structures.

Admiral Sir Julian Oswald: I have just a couple of points to make, as much has come out already. We must remind ourselves that the Navy was there already in the sense that it had been operating in the Persian Gulf since the year dot. The very large gentleman on my left, whom I treat with great respect because he is a lot bigger than me, and I were both there in 1961 in a previous incarnation when there was trouble in that area. So it came as no surprise to the Navy to be expected to do more in the Gulf.

The importance of the lessons learnt in 1982 in the Falklands is not lost on people. A lot of good command and control points came out of that campaign and, on the whole, they were well and sensibly picked up when it came to what we would send and what we would try to

do with it in the Gulf. The only real criticism I have of the state in which we ended up was that we had too much, to be fair, political interference in the actual construction of the military force – certainly from the naval point of view. He is not here, so I will not mention his name, but one particular Minister became known as ‘the long screwdriver’. We all know what that means. It is interfering from London in what is going on in Kuwait, Bahrain or somewhere else like that. That became quite a significant worry.

However, all was well because other Ministers and authorities took a very sensible view, but it remained rather worrying that right through the campaign when the Navy thought that something additional was required by way of forces and perhaps an aircraft carrier was the supreme example, it found the greatest difficulty in persuading not only Ministers, but civil servants that this was a reasonable road down which to go. The net result was that the Naval contribution, although appreciated and sensible, was not as great as it might have been.

Field Marshal Sir John Chapple: I want to step back a moment to the question that was asked about where the Army was at the time of the Kuwait invasion. We certainly were not focused on Kuwait or Iraq because we were engaged with the other two Services at the Ministry of Defence on ‘Options for Change’, which was a thinly disguised defence review – the largest one since the end of the Second World War. The Cold War had only ended a few months beforehand. The staff at all levels in the commands were much engaged from February that year onwards with coming to grips with changing from what had been a threat-dictated Army to one that was capability-based, without knowing necessarily what the threats would be. There were lots of political arguments with our bosses, all conducted in a gentlemanly manner but, by the end of the parliamentary session in July, the Royal Navy and the Royal Air Force had more or less decided on the shape and size of their reductions. We still had a lot of work to do – only about four decisions had been taken.

The first decision was to reduce the size of BAOR³³ by half, down to 25,000. Why 25,000, we did not know. The second decision was to reduce from four operational divisions to two; thirdly, to have only one brigade committed for the United Nations; and, fourthly, one brigade – a light brigade – for out-of-area operations. We must remember that we had withdrawn all our bases east of Suez, except Hong Kong, in the 1967 withdrawal. Only those four decisions had been taken by July. They were included in a parliamentary announcement in the last week before Parliament broke up for two-and-a-half months’ holiday. During that week, there had been a bit of trouble in Trinidad and a bit of trouble in Liberia. We sent small numbers of soldiers to both places, so it came as a bit of a surprise when Iraq invaded Kuwait.

We did not have any initial plans, of course, as has been brought out in the previous discussions, to deploy land forces. It is worth remembering that it was a late July invasion, but it was not until 14 September that the first political decision to deploy any land forces took place. I shall stop there, because such matters will come up in our other discussions.

Dr Robert Johnson: I am conscious that we have about 45 seconds left to run. I have several things to ask about tasking and the considerations of each of the Commanders. Given that we shall be looking at the naval blockade, the air embargo and operations immediately after lunch, perhaps Lord Powell can make a quick response about tasking, structures and consideration of opposition casualties or whatever was on his mind at the time.

Lord Powell of Bayswater: I shall deal first with Sir John's point on 'Options for Change', which was indeed a big issue at the time. It is important to remember that 'Options for Change' was designed to build a strong platform below which our forces would not be reduced. The feeling was that, at the end of the Cold War, everyone said, 'Okay, let's have the peace dividend. Why do we need defence? Cut the Ground Forces'. Clearly, something had to be done, but the approach was to build a sustainable platform so we could not be rushed into making unacceptable reductions.

Margaret Thatcher's involvement in the military aspect of the campaign lasted only until the end of November when she was dethroned or defenestrated – or whatever you like to call it. She did not initially envisage the use of British Ground Forces. The initial focus was very much on the use of air power, sending aircraft out to the Gulf, and the Armilla Patrol. Indeed, at the first meeting, my recollection is that George Bush never raised with her the subject of a British commitment of Ground Forces. That came later. Her concerns were in no particular order: first, how big a threat was the Republic Guard? One heard many different views about that. I think that I am right in saying that the JIC took a pretty dramatic view of its strength. A lot of the countries in the region said, 'No, no, it will crumble pretty quickly'; secondly, would Saddam use CBW³⁴ or not? Again, there were mixed views on that. Very unmistakeable warnings were given to him about what would happen to Iraq if those sorts of weapons were used; and, thirdly, whether the nature of the targets that ought to be attacked in Iraq could extend to bridges, power stations and so on, and was that the right thing to do? A particular point that Sir John and I were discussing in the car on the way from the station was whether our Challengers would break down because they always seemed to be breaking down in Germany. Margaret Thatcher summoned the Defence Secretary³⁵ and the head of Vickers³⁶ and made them sign in blood a statement that the tanks sent out to the Gulf would work all the time. Sorry, that is not quite true. They had to be reliable 80 per cent of the time.

Margaret Thatcher was concerned about the choice of the British Military Commander on the spot. He will be speaking for himself, later of course. She was very keen indeed to have Peter de la Billière there and made that clear. Overall, her main concern during the final months she was in power and involved in the situation was to secure an early start to the military campaign – earlier than many people might have thought wise. She did not believe in the business of 'give sanctions a chance to work', because she was convinced from early on that sanctions would not work. She thought that they were useful, but would not do the job. She also feared that, given too much time, Saddam Hussein might withdraw without being

thrashed in the process. My military colleagues will remember that she was constantly nagging at the Americans for the earliest possible start to the military campaign.

Dr Robert Johnson: Clearly, there is much that we have had to leave out, such as the crisis talks and the Baker/Aziz³⁷ meeting at the eleventh hour. However, we have been taken from crisis to conflict. After lunch, we shall be dealing with the conflict and its wider political ramifications. I accept that several people on the panel have not yet spoken. They will get their chance, but I thank them for their forbearance so far.

Notes

¹ HRH Duke of Edinburgh, consort to HM Queen Elizabeth II.

² Jaber III Al-Ahmad Al-Jaber Al-Sabah (1926–2006), Emir of Kuwait, 1977–2006.

³ Adopted 29 Nov 1990.

⁴ Translation: 'How it essentially was'. From Leopold von Ranke, *Geschichte der romanischen und germanischen Völker von 1494 bis 1514*.

⁵ Leopold von Ranke (1795–1886).

⁶ Leader of the Conservative Party 1965–75; Prime Minister of the United Kingdom 1970–1974.

⁷ April Glaspie, US Ambassador to Iraq, 1988–90.

⁸ King Fahd (1921–2005), King of Saudi Arabia.

⁹ King Hussein (1935–99), King of Jordan, 1952–99.

¹⁰ Hosni Mubarak, President of Egypt, 1981–2011.

¹¹ Sir Percy Cradock (1923–2010), Chairman, Joint Intelligence Committee, 1985–92.

¹² George Bush, US President, 1989–93.

¹³ 16–17 Mar 1988.

¹⁴ Churchill Crocodile Flamethrower Tank.

¹⁵ Alan Clark (1928–99), Minister of Trade, Department of Trade and Industry, 1986–9; Minister for Defence Procurement, Ministry of Defence, 1989–92.

¹⁶ Dan Keohane. 'The United Kingdom', in Alex Danchev and John Macmillan (eds), *The Iraq War and Democratic Politics* (London: 2005).

¹⁷ Professor Fred Halliday (1946–2010), Professor of International Relations, 1985–2008, London School of Economics and Political Science.

¹⁸ Eduard Shevardnadze, Soviet Minister of Foreign Affairs, 1985–90, 1991.

¹⁹ 29 Nov 1990.

²⁰ James Baker, US Secretary of State, 1989–92.

²¹ Brent Scowcroft, US National Security Advisor, 1989–93.

²² See M Kandiah and G Staerck (eds), *Anglo-German Relations and German Unification: Witness Seminar* (London: 2002).

²³ The Community Charge, or Poll Tax, was a system of local taxation designed to replace domestic rates, which was introduced in Scotland in 1989 and then in England and Wales in 1990. The Council Tax replaced it in 1993.

²⁴ Margaret Thatcher, *The Downing Street Years*, pp.823–24.

²⁵ Ronald Regan (1911–2004), US President, 1980–8.

²⁶ Dick Cheney, US Secretary of Defense, 1989-93.

²⁷ Douglas Hurd (Lord Hurd of Westwell), Foreign Secretary, 1989-95.

²⁸ Denis Healey (Lord Healey, 1917-2015), Defence Secretary, 1964-70; Chancellor of the Exchequer, 1974-9.

²⁹ Thomas Pickering, US Ambassador to the United Nations, 1989-92.

³⁰ Lord Wright of Richmond (Sir Patrick Wright), Permanent Under-Secretary for Foreign Affairs, 1986-91.

³¹ Prince Saud, Minister of Foreign Affairs, 1975-.

³² Norman Schwarzkopf (1924-2012), commander of the Coalition Forces in the Persian Gulf War of 1991.

³³ British Army of the Rhine.

³⁴ Chemical and biological weapons.

³⁵ Tom King (Lord King of Bridgwater), Defence Secretary, 1989-92.

³⁶ According to Jonathan Aiken, *Margaret Thatcher: Power and Personality* (London, 2013): 'Her grilling of the directors of Vickers about the reliability of the Challenger tank became a legend in the company folklore' (p.601).

³⁷ Tariq Aziz, Iraqi Foreign Minister, 1983-91.

Britain and the 1991 Gulf War Witness Seminar

16 March 2011

Cormorant Hall, JSCSC, Shrivenham, Wiltshire

Session 2:

14:00-15:30: Discussion of the Prosecution of the Conflict

Dr Robert Johnson: It is 1400 hours and, with military precision, we shall recommence our proceedings. We will move smartly into a debate about the war aims and some of the war planning that took place. Hopefully, that will lead to a discussion of the knottier issues of targeting, rules of engagement, casualties, strategic communications, adjustments to plans as events unfolded, land campaigns and some views from the different perspectives of the campaign, such as different nodal points within the command structure, including the Brigade Commander's view and so on. Without further ado, let us get going.

What were British war aims, as interpreted by some of the service chiefs? I shall ask, in particular, Air Chief Marshal Sir Patrick Hine to describe his understanding of the position. I shall then call on Captain Chris Craig to talk about the Royal Naval dimension in the Gulf and Sir Peter de la Billière to explain his understanding of the situation as the plans began to shape up and form.

Air Chief Marshal Sir Patrick Hine: Thank you. As a key military member of the coalition, aim number one was help in the liberation of Kuwait. I say 'key' because, although we were small by comparison with the American forces, by the time the conflict started, we had 45,000 people committed to the operation. That was air, land, sea and Special Forces. Secondly, if it came to war, we planned to destroy as much of Iraq's key military capability as possible, because we did not want to have to go back in five or six years' time to do the same thing all over again. Part of that was to get a handle on and destroy at some stage Iraq's chemical, biological and nuclear weapons and research capabilities. Thirdly, we wanted to subscribe to a strategy through inputs to Norman Schwarzkopf's headquarters that, whilst achieving the main aim rapidly, also minimised the risk of significant allied casualties.

Those three broad aims link into the planning process on the military side, which started, I suppose, when I had my first meeting with Norman Schwarzkopf towards the end of August

1990. To remind you, that is when he said to me, 'I want some armoured forces from you', which led to the deployment of the 7th Armoured Brigade, and 'I want Tornados equipped with the airfield denial weapon, JP233', which was a capability that the United States Air Force did not have.¹ We got on to the subject of command and control at one stage during the discussion, and I said to him that, from my perspective, I was quite happy to pass tactical control to the appropriate American commanders – himself and his subordinate commanders – at the right stage when it looked as though we were going to war and on the basis that the tasks that he envisaged for our forces were consistent with the directive that I had been given by CDS.

The command and control arrangements would be MOD down through the Joint Headquarters, where we would retain operational command, out into theatre where General Peter would have OPCON.² When he was happy with the task given to our forces, tactical control was given to Schwarzkopf and his appropriate subordinate commanders. I said that I was happy to do that on the basis that he would involve our commander-in-theatre in his daily senior commanders' conferences and that we also had British officers in the key operational planning teams. I think that I am right in saying that, by the time conflict broke out, we had about 100 UK officers in the various planning teams in theatre. Without going on any longer, those were the key objectives that we had in mind when the fighting started and how we were involved in the planning process.

Captain Chris Craig: I was the Commodore in command of the Royal Naval Task Group in the Gulf throughout the war. On my arrival in November 1990, my first impression was that there was a paucity of integrated war planning. Accordingly I consulted largely with the Americans in the person of Vice Admiral Stan Arthur who was USN CTF³ of the entire region. At the end of December, we had a final constructive meeting in which he asked for Royal Navy detailed contributions on which I had obtained British national approval to support maritime operations on the right flank.

We were not shy about offering aggressive forward commitment. This was in unfortunate contrast to one or two European nations, who were not prepared to put ships into the killing zone at the north of the Gulf. We also had a wealth of Falklands fighting experience in inshore fighting operations. We had a willingness to take our Royal Fleet Auxiliaries into harm's way, so that they could keep the primarily British and American warships topped up with fuel and water throughout. And we had great familiarity with the Gulf region stemming from the British warship *Armillar* patrol having been deployed since 1980.

Vice Admiral Stan Arthur⁴ was delighted with those general contributions. He also welcomed our specialist, guided missile destroyers, *Sea Dart*⁵ armed, in the very forward line of air defence – integrated with American air defence cruisers and destroyers. I was happy to hand off tactical control of these (usually two) British warships provided we had rationalised our rules of engagement (ROE) first. I do hope that that subject comes up at some stage in

the afternoon. It is really vital. He greatly valued our Lynx helicopters, armed with Sea Skua,⁶ in the front line to help neutralise the Iraqi Navy. They were to do very well in that task. Best of all, he wanted our Mine Countermeasures Force, which I unashamedly say was one of the best in the world to punch clear lanes through the Iraqi minefields onto the Kuwait coast. Perhaps, above all, he was thrilled to have RFA Argus,⁷ which was a primary casualty-receiving ship – converted from our helicopter training ship – with containerised ward and surgery. She would be positioned up just behind the front line to look after casualties, as and when they arose – a brutal lesson that we had learnt in the Falkland campaign. I hope that gives you just a flavour of the war planning for my Task Unit, which eventually increased to 26 ships, 18 helicopters and 6,000 personnel. It was not an insignificant contribution.

General Sir Peter de la Billière: I was the British Forces Commander in the Gulf, working directly to Paddy Hine and alongside Norman Schwarzkopf. I saw the war aims as slightly varied on what Paddy has outlined, in that I went out there and took over from Air Marshal Sandy Wilson⁸ when it largely became a military operation – albeit, and most importantly, a tri-service operation backed up by the Navy and the Air Force. Initially, we saw our role as being to hold the line in Saudi Arabia or help the coalition hold the line in Saudi Arabia to get the coalition together and working in the early stages. To that extent, what Paddy had set up for us with Norman Schwarzkopf was of the utmost value and importance in the conduct of the war from then on, in terms of our joint relationships and understanding of the command and control situation.

When it became apparent that Saddam Hussein was not going to pull out under threat and bribery, we started to prepare for war, though still hoping that war would never happen. That required an enormous change and increase in the logistic requirements and in the actual deployment. The maintenance of the sea and air to my mind was of paramount importance throughout the operation. Any of those could have been put at threat in the early stages. Saddam Hussein made several sorties by air against our shipping, in particular. He also threatened us over the border, which Bill Wratten will talk more about later. It was thanks to the Navy and the Air Force that those threats were held at bay and treated with the contempt that they deserved both in technical ability and their aggressive nature before we had even declared hostilities.

It then became more and more clear that we were not making progress, so the planning switched to a possible invasion. It was not an overnight decision. It was a massive build-up of enormous quantities of resources having to be shipped out to the Gulf, landed and then transhipped across the desert for many miles. Such a logistic campaign has probably not been matched in recent days. We were then ready for invasion, if that was to be. As I remember it, right up to the last week before we went in, Paddy Hine was saying, 'It is likely that we are going to invade, but I can't say that we are definitely going to now'. By that time, we had to be deployed in the desert, at sea and particularly in the air, which would have been the initial requirement of any offensive operation.

With an evolving aim, which we see so often on such occasions, as the politicians have to adjust to events as they unfold, at no time in my mind were we going out there in the early stages to invade Kuwait. We were going out there to prevent war, to protect the Saudi Arabian border and we would do that with the coalition. Perhaps one of the triumphs of the whole campaign was, in fact, the success of the coalition. Arguably, a number of countries were involved. About 31 to 32 nations were working as we heard earlier not under the United Nations mandate, but because they wanted to be there and wanted it to work. It was impressive, and I think that the Americans must take great credit for putting that together, holding differences of opinion at bay as the whole war aim evolved, making adjustments to the deployments within the theatre not only on the best available solution, but on what each nation was prepared to do and how upfront it was prepared to be.

Air Chief Marshal Sir Patrick Hine: Can I just clarify one point? The war aims to which I referred were related to what became DESERT STORM. It changed from DESERT SHIELD to DESERT STORM some time about the beginning of November, when it was clear to the Americans that sanctions were unlikely to work and that political pressure was unlikely to persuade Saddam to withdraw from Kuwait. That was the point at which they went for a major reinforcement of their forces in theatre: from the 230,000 initial build-up to support DESERT SHIELD, to close on half a million to prosecute DESERT STORM. To avoid confusion, the war aims that I gave were the war aims for DESERT STORM.

Dr Robert Johnson: That is probably my fault in respect of chronology. It is very important for us to clarify the difference between the strategic tasking and what is operational, which is what we are agreeing about now. At the risk of labouring the three speakers further, will they clarify whether the transition from the strategic picture to an operational one was smooth and the extent to which that depended on personalities or structures and institutions? Can they make a brief comment on that transition?

Air Chief Marshal Sir Patrick Hine: From my point of view, personal relationships were always going to be very important. I was able to establish an excellent personal relationship with Norman Schwarzkopf, who always welcomed any strategic input that we might have from the Joint Headquarters level, as well as receiving his own inputs from Peter de la Billière in theatre. It seemed that we moved pretty swiftly from a decision that it was almost certain that we would have to mount an operation to liberate Kuwait to the various operational deployments and decisions that had to be taken. Peter touched on one of them without going into any detail.

When we were asked to deploy another armoured brigade out to theatre during the repaid reinforcement that was agreed at the beginning of November, it afforded the opportunity of bringing the British Ground Forces' strength up to divisional level. It made operational sense, bearing in mind that that combat capability came primarily out of the central region of Europe to plug in, if we could, to what we knew by then would be the major assault with a wide left hook to engage the Republican Guard forces.

Our whole training had been in the central region to withstand an armoured penetration from the Warsaw Pact, along with the Americans also in the central region. So for us to become part of the 7 Corps wide-left hook made a lot of strategic sense, and sense from our military capability point of view. General Peter was much involved in engaging Norman Schwarzkopf. After we had persuaded him that we could support the division logistically on a rapid advance, he agreed to the re-subordination away from the US Marine Corps forces on the right wing to be part of 7 Corps on the left wing.

Dr Robert Johnson: Will General Sir Peter comment on that option, as well as the other options that were possibly on the table between him and General Schwarzkopf?

General Sir Peter de la Billière: Before I say anything further, I must say a little about Norman. He is the guy who ran that war and made it the success it was, with his immense strength, as well as his shortcomings. It was quite clear to me that getting on with him in a very personal way was of critical importance to the British presentation and role out there. Norman was extremely straightforward and very strong-minded, but he listened. You could go to Norman with an argument, which at the start he would disagree with, be persuasive, put a little national pressure on – thanks to the rear links with Paddy and up to Prime Minister, if necessary – and he would go along with it with very good grace.

Norman and I had both had experience of heavy casualty wars: myself in Korea, and he in Vietnam. I remember at a fairly early stage in the planning, when it switched, as Paddy has described, from holding our positions to possible invasion, we both had a side chat after daily prayers that neither of us wanted to see heavy casualties. We felt that it was a mission on which our own personal judgment would assess us afterwards through our conscience.

Why were there not heavy casualties? I know that I am moving on a little, but if I may, I want to give you a clear answer to that. There were not heavy casualties, first, for the very reason that command and liaison at all levels were harmonious. We were not squabbling among ourselves – three services, Paddy and I, the Government and the Americans. We had issues, and they had to be sorted out. Our Government from my perspective supported us with – we heard this from Charles Powell, another side view of the position – confidence and a firmness that I can only say was most welcome to commanders in the field.

That meant that, when we put forward for a division that Norman had asked for and to which we were persuaded to agree by Paddy speaking and arguing with him, we got instant support from the UK. That is a memory that I shall take with me for the rest of my life. It made a difference not only to our military contribution, but to our political standing in the war. It made us unequivocally the second most important force out there. The support from the UK was important. I know that military people are in the audience. The importance of getting the relationships right at the top is critical in any operation. If it is not right, we will not see very

much; but, by God, we will feel it down the system, because the ripples will go down, and that is what became right with working with Norman.

The other issue was command and control. We were operating from Saudi. It was their country and naturally they wanted to run things and be in charge. Here again, a major contribution came from Norman. It was an American war, which they could run on their own, without any of us there. It would have been a bloody sight easier actually. There would not have been all the political hassle. However, it was agreed that, Khaled bin Sultan, the Saudi General,⁹ was the Commander in Chief while the forces were in Saudi, while once they crossed the border, the Commander in Chief became Norman Schwarzkopf. You can work out in your own mind how that worked – very smooth, as it turned out.

I want to say one more thing on the planning side about the relationships between the Foreign Office and us in theatre. We had Alan Munro, whom you have heard speak this morning, in charge of Foreign Office affairs, and me. I had learnt in the Falklands that, if you want to get things done in Whitehall as a military commander, you do not go prattling back to the Ministry of Defence on your own, which will then discuss it with the Foreign Office, which will then form its own policy, and then put it to the Government, who will then probably decide something quite different. You get together with the Ambassador, make sure you are friends, and agree a policy before it ever goes near Whitehall and then place it in Whitehall's lap from two different angles so that, when the Ministry of Defence goes to the Foreign Office, it finds, hey presto, the Foreign Office is right on-side with the proposal.

Alan and I developed a relationship of that nature through regular conferences and discussions, which I like to think worked effectively. Alan said that he got his hide tanned by the Foreign Office for agreeing with me too much! But there we go.

Dr Robert Johnson: There are lots of points that now need to be picked up on, one of which is the issue of casualties. I want to pick on two people, in particular, to discuss that. Admiral Julian Oswald will make a comment briefly about casualties. Given the present mightiness of history that casualties are such an issue always in considerations on operations and strategy, it might then be worth Sir Alan Munro responding briefly to that, too.

Admiral Sir Julian Oswald: I do not have much to say, except that at that stage the Chiefs of Staff were engaged for many hours in discussing the likely level of casualties, and what ought to be done. It transpired that all our discussions were based on estimated casualty figures that were wrong by not one, but probably two orders of magnitude. We were looking at horrific casualty figures, and we were too easily persuaded that they were actually likely. In the event, of course, thank God, the casualties were extremely small on the allied side. Whether that was picked up in subsequent staff work to see why we had gone so wrong, I do not know, because I had left the job by then. Someone else might be able to tell us.

Sir Alan Munro: On the whole question of the casualty side, that also came into our handling of a very large, nearly 27,000-strong British community in the area, and my colleagues had their own communities to worry about. That was a major dimension to the diplomatic work in parallel with all the liaison that one was continuously engaged in with Peter, and I think that we had a harmonious and useful relationship. Although there was some vexation at the Ministry of Defence, he did not in the end have his own political advisers. In effect, I served as his political adviser and it seemed to work pretty well.

On the casualty side, mercifully, we did not find that the various chemical weapons, in particular, that had been in the offing were used and there was therefore a certain over-supply. Indeed, all surgery had to cease in southern Scotland, because the territorial hospital based on Paisley suddenly found itself in one of the terminals of Riyadh Airport. I remember going out the first morning they had arrived. The territorials had a scud raid on arrival so that they had a baptism of fire. I found a medical orderly and said to him cheerfully, 'Ah, what do you normally do?' He said, 'I am a driver on the London Underground.' I said, 'Oh, what happened?' to which he said, 'I got to Earl's Court and they told me to report, so I did. I left the train and went.' I reckon that the train was still there a week or two later, because there was no one else to drive it.

It was a splendid show. One of the interesting things was that, towards the end, we asked other countries to help out, thus producing uncommon bedfellows: some eastern European countries produced field hospitals in support of our anticipated casualties. Another of them was the Swedes. They were thrilled to come. They sent surgeons and nurses from Stockholm in uniform. We had a dinner to commemorate with the Swedish Ambassador. King Bernadotte's¹⁰ sword from the Napoleonic Wars was brought out to mark the event as the first occasion when Sweden has taken sides in any conflict since the Battle of Leipzig, which I think was 1713.¹¹ It was a remarkable turnout.

Another little example of our co-operation, but one of considerable media interest was over the successful and timely visit in the December before the 'off' by the Prince of Wales. The original idea mooted was that he should be accompanied by 'you know who'. Along with Paddy Hine, we agreed for our own reasons that that needed to be blocked. It would have confused, as I stressed, the cultural aspect to have a very senior lady who was of very much interest anyway to much of the media, and it would have been exploited on the religious net, which one always had to bear in mind in advising Peter – it would be exploited by Saddam's very agile propaganda element for bringing in this female participation. Indeed, there were times when we all had to consider what would have been the attitude in 622 – the year of Hijra, when the Prophet Mohammed went from Mecca to Medina – when we tried to decide what line to take over the position of our forces in regard to certain aspects of religious worship in the kingdom. We did need quite an historical reach-back to back up what was a contemporary war.

Dr Robert Johnson: Field Marshal.

Field Marshal Sir John Chapple: I want just to add something to the medical side of things. There were more than 6,000 members of the Army in the medical team, some in the UK, but 5,000 were deployed. Of those, 3,500 men and women were in the medical services, including a large number of reservists and in the TA, and another 1,500 were made up of regimental bandsmen; 27 regimental bands took part in their wartime role as stretcher bearers, etc. It was the biggest medical deployment that we had had – well over 15 per cent of the total force – for a long time.

Lord Hamilton of Epsom: Military casualties were incredibly light, and we were very lucky. The point should be made that a significant number of the casualties were blue on blue, caused by the US Air Force, which had great difficulty in differentiating between an Iraqi tank, a Warrior and a personnel carrier. That should certainly be noted in future. The forecast of casualties were a significant element in the decision to redeploy. We had our armoured brigade supporting the US Marine Corps, and when it became a division, as Peter has said, it was decided that it should be part of the left hook. I did not agree with that.

I would have been more comfortable if we had fought with the US Marine Corps, whose esprit de corps is liable to be rather higher than that of the US Army. Nor did I see the point of extending our supply lines from 80 km to 400 km, when we had a non-inoperable tank. There was a debate over that, but the redeploying of our armoured division into the left hook was not actually a free lunch, because Schwarzkopf needed support for the US Marine Corps and had to find another armoured division from somewhere else in his forces to support the US Marine Corps.

Dr Robert Johnson: Perhaps we should turn swiftly from inaccuracies of targeting by American forces to the targeting decisions that were made by our own Air Force and the selection of targets. That might lead us to a nice discussion about rules of engagement, as Captain Craig rightly reminded us that we must talk about. I call on the former Chief of the Air Staff, Marshal of the Royal Air Force Sir Peter Harding, and Sir Richard Johns to give us a flavour of the RAF position on specific targeting. Perhaps they can consider enemy casualties and even so-called enemy civilian casualties.

Marshal of the Royal Air Force Sir Peter Harding: The part we played back at base (the MOD) was quite small in relation to targeting: that was very much the job of the Air Commander in Theatre. What I thought was almost miraculous was that the Head of the Air Operation planning did a most remarkable job in that several thousand sorties per day (over a 24-hour day) for some weeks non-stop were carried out without any problems of movement into and out of airfields, blue-on-blue clashes or de-confliction. These operations covered the whole range of air operations from targeting Iraqi airfields to ground support.

Taking out Iraqi airfields was our first priority, ie, to neutralise the Iraqi air forces, a task that was quickly done concurrently with radar destruction and that of command and control facilities. In the end, we did not really see much of the Iraqi Air Force getting airborne, except the large number of aircraft who decided to go to Iran rather more permanently!

We were frequently approached by various people in the MOD to widen the targeting base or at least to try to get the Alliance to do so out there. However, in my view, these people were thinking more about total warfare than the sort of activity we needed to carry out the limited aim of retrieving Kuwait and to leave Saddam in a position where he could not easily resurrect his forces. For example, that did not mean taking out all the oil refineries in Iraqi, they would almost certainly be needed when it was all over. We had to be very careful on that score.

The initial concentration on air supremacy was exactly right. Indeed, within a week of the operation starting, we heard from Washington that it had already declared that air superiority had been achieved in the area. That meant, of course, that the Iraqis did not have the opportunity to attack our very vulnerable ground forces. Do remember that they were in a cover-free desert and there were not many places to hide. Moreover, a great deal of equipment, stores and people were all over the desert and would have been easy meat for anyone who had control of the air. Air supremacy was vital and was achieved early on.

Particularly interesting was the fact the General Schwarzkopf, having got the air force general to devise the plan, changed the latter's job from plans to ops and said, 'You devised it, now make it work'!!

Generally speaking, our part in the operation was fine. We got a lot of flak, particularly from the press, for flying at the very low level over airfields, but it was always HMG's policy right up to the war that what we provided for NATO would be what we used for other operations. So we were stuck with what we had and, of course, to be effective in taking out the runways, and deny the use of the airfields to the enemy, we had to use the JP233, which in any case the Americans thought was a good and effective system, so we were asked to send as many Tornados as we could afford so that it could be used to good effect. It was, of course, a very difficult thing to do and I was told afterwards that the flak was appalling. Very courageously, they had to bear the brunt of that and a few were lost.

Newspapers always overrate such things, and they banged on about the vulnerability of the Tornado. That was sheer nonsense: counter air operations at low level was not without its risks, but it was something we may have had to do against the Warsaw Pact forces, since we all had to delay as long as possible a nuclear decision. Thus, we had to keep a conventional war going as long as possible. So, in the Gulf War, we had what we had and we operated with what we had. Looking back at the number of casualties, although each one was a tragedy for those crews and families, they were really quite small in relation to the number of sorties we carried out and the territory we had to fly over. It was a miracle that not more were lost.

When looking to future scenarios, the lesson we learnt is that we should not look to specific expected threats or provide specifically for those threats. Ten to one, they will not appear, but some other threat will! What we need, and I hope HMG is listening, is a range of capabilities to make sure that we could meet most situations. There are always going to be certain basic requirements like air defence, maritime and strike operations, communications, etc, for all sorts of situations that are essential to have.

Generally speaking, it was a suburb air operation, beautifully carried out by the Allied air forces, of which there were many. Our part was relatively small in relation to overall numbers, but very useful indeed in relation to impact.

Dr Robert Johnson: For another headquarters view, I turn to Sir Richard Johns. I will then turn to the actual theatre view from Sir William Wratten.

Air Chief Marshal Sir Richard Johns: I was not involved in any way in targeting policy. I was the Director of Operations, a two-star officer in the Joint Headquarters. My job basically centred initially on the deployment and sustainment of Armed Forces from all three services out to theatre, and after the war started, it was keeping my Joint Commander, Paddy Hine, briefed twice a day on precisely what was going on, future plans and so on, which were passed to me from in theatre. Air Chief Marshal Bill Wratten, who was the Air Commander out there, is far better placed than I am to talk about direct air operations in accordance with targeting policy. Where are you, Bill?

Air Chief Marshal Sir William Wratten: Down this end! I agree entirely with the points made earlier about the importance of personal relationships. General Charles – Chuck – Horner¹² was General Schwarzkopf's Air Component Commander. He was a three-star general, who was a Vietnam vet. He had suffered the frustrations there and was not about to let them happen again. He, with his immediate staff, obviously with Pentagon support, had devised an air campaign plan, which was split into five separate sections – some of which could run concurrently, the top priority being that of establishing air supremacy and, after that, taking out the various NBC locations, C-squared locations, the Republican Guard, for example, and reducing the land forces in the desert to what was decided to be 50 per cent of their capability.

The ability to judge that later on caused a bit of concern. It is all very well to say it, but far less easy to judge when it happens. All those elements of the air campaign plan were rolled into the air space control plan and the daily air task order, which was produced by one single air planning cell, staffed by front-line operators, who had recently come off squadrons, armed with state of the art computers and planning software. That produced something every 24 hours to run the subsequent 36 hours, so part of it overlapped and that was refreshed as time went along. The planning cell was also manned by our own planners. I particularly had a Tornado-experienced Wing Commander, who saw to it that our resources were employed as we wished them to be employed and which aligned with political directives.

That is where my relationship with General Horner was most important. His philosophy was that you can do and we want you to do what you do best, but you must be a part of the air task order. Nothing flew in theatre that was not in the ATO. It was a huge document. It was the bible of all air operations. In particular, it reflected the very large force packages that are the bread and butter of the flag training operations in the States. The advantage there, of course, was that all of the US forces and many of the coalition Air Forces had been through the flag programmes. We all spoke the same language. We knew the terminology. We were accustomed to force package thinking, and that is why it glued together remarkably well and extremely quickly.

Advantage was also taken of interoperability. You will all be familiar with the size of a US Carrier Task Force. There were six of them in theatre, three in the Red Sea and three in the Gulf, with many F-14¹³ resources and other elements as well. The US Navy uses probe and drogue air-to-air refuelling. Our VC10s, Tristars and Victors were in their element, feeding into what the US Navy was providing, particularly in the way of fighter escort to the very large force packages. It all worked rather well. There were several hiccups on the way, and I am sure that we shall discuss the impact of Scud later.

I shall just conclude on my perception of RoE and the essential nature of aligning rules of engagement throughout the coalition before combat begins. Before the actual bullets began to fly, the Royal Air Force was flying Tornado ADVs as fighter escorts on some of the US and coalition high-value assets – for example, the E-3 AWACS and the Rivet Joints. The American identification of a hostile aircraft was one single aircraft coming in towards the HVA at high speed. We had to have two aircraft coming in, so you can immediately see that, although we could fly fighter escort, the HVA itself could well identify a hostile aircraft, which we at the time were not able to engage because we needed to see two of them. That is the sort of urgency that we in theatre tried to transmit back to the UK with varying success.

Dr Robert Johnson: To come back to the issue of Scuds, I want to know the Royal Navy's view of the rules of engagement. Captain Craig, can you comment?

Captain Chris Craig: I should like in just a moment to let Philip Wilcocks (Captain of HMS Gloucester – one of my destroyers in the Gulf), speak, but may I first stress the overall importance of RoE from the Navy's point of view.

If my colleagues and friends in the Royal Air Force are concerned about the possibility of losing a single aircraft with two highly paid airmen through overly prescriptive RoE, just contrast that with the potential difficulties of a multi-hundred million pound warship exposed in the very front line, with a fast incoming air target that may be about to launch anti-ship missiles at you. The price of failure then might be this valuable hull on the bottom and maybe three hundred body bags to parade back home.

Anyone who says that ROE – the correct balance between political constraint and adequate self-defence – is not of pivotal importance in a time of rising tension is completely missing the point. I now hand over to my good friend and colleague, Philip Wilcocks.

Rear Admiral Philip Wilcocks: I am speaking as a unit commander rather than a formation commander. We arrived out in theatre on 27 September and effectively went up threat from then until the beginning of March, with the occasional time off. We have talked about command at the higher level. From a unit command perspective, my challenges were that I was under the full command of Commander-in-Chief Fleet in the UK and under the operational command of the Joint Commander in High Wycombe. I was on the operational control of General Sir Peter in Riyadh. I was under the tactical command of Chris Craig, and for various elements of my capability, I came under tactical control of predominantly American commanders in that Admiral Dan March in Midway was responsible for my positioning within the Gulf. I had an AAW commander in USS *Bunker Hill*, who was responsible for my AAW capability, and for surface warfare capability, I came under an American destroyer commander. My Lynx came under the command of the Forward Air Controller, when I deployed him forward, and the embargo operations were under the command of a completely different American commander. When we moved forward, I had relationships to develop with the MCM commander and when the *Missouri* came into doing naval fire support, I was under his command for my positioning as his 'goalkeeper'.

The command challenges were somewhat challenging at unit level, and in the early stages, that reflected the rules of engagement. The Sea Dart weapon system in the Type 42 has a range of about 40 miles. In addition, the ship carries two fighter controllers that were controlling both American Air Forces, but more particularly American Navy fighters. My rules of engagement said that I could only use my offensive capability in the early stages when I had determined that the unit coming to attack me was hostile at three miles. That was somewhat challenging. It seemed to us at the front line, to both myself and the Captain of *Cardiff*, the other British destroyer, that that was a reflection of the rules of engagement that had been in place during the Armilla patrol and had not really been updated. After a session in my cabin with Sir Peter and Captain Chris, it became clear that I had to use my inherent rules of self-defence to allow me to use my offensive capability to make sure that my ship was not hit.

I wish to touch on the information exchange. It is very easy these days where we are in jointery to think that the first Gulf War had a seamless information exchange. The air tasking order came to me as a wodge of paper via [USS] *Midway*, via *Bunker Hill* and my air team had then to distil them into an understanding of what was going on. To give a feel of what was happening in the Gulf itself, in any one 24-hour period about 600 air contacts would come overhead predominantly as aircraft were egressing from the Kuwait and Southern Iraq area into our own overhead. That was challenged by the fact that we did not have a blue on blue. I remain astounded at the fact that that did not occur. When we shot down the Silkworm missile¹⁴ in the latter stages of the campaign, we were about 22 miles off the Kuwait coast. It took two hours

after we had shot down that target for my AW commander to confirm that all friendly aircraft had got back. I spent that two-hour period wondering whether or not I had made the right decision to shoot.

Air Chief Marshal Sir William Wratten: It was alluded to earlier that the scale of the air operation was enormous. Peter mentioned that more than 2,000 sorties happened per 24 hours. Obviously, nearly half of those were in the dark and a lot of them were under silent RT procedures. There were tanker forces layered with only 1,000 to 2,000 feet between them, six layers on occasions. It was a great credit to everyone involved from the planners through the operators that we did not have a huge number of blue on blues. That was the biggest concern of all in the first 24 to 48 hours.

The air space control plan is just as important as the ATO, of course, for reasons that have just been mentioned. If those with radar returns do not know what to expect, there is inevitably a high risk of blue on blue. The fact that that did not happen – to our knowledge – was a huge credit to the operators, to their professionalism and their ability to use their good sense at the time.

Dr Robert Johnson: Quite right. We should recognise such things. I want now to move to slightly more problematic, knotty areas not just because I am one of those people who like to make your life difficult, but because one of the problems that emerged in the war was the issues of Scuds. It could have completely wrong-footed the campaign from the strategic point of view and damaged the leaky coalition to which Sir Alan referred. General Sir Peter de la Billière, how critical were the attacks? Can you explain the decision-making process that led to the deployment of Special Forces as a hunting force for those scuds?

General Sir Peter de la Billière: Let me first get my position in this right. I served about 20 years with the SAS during its evolution from a small-time jungle patrol to the Gulf War. We need to understand that, in that period, it was an integral part of the Army, just as the Armoured Corps or the Artillery were, and it has a special role for which it was specially trained and for which people were specially selected. However, there is a tendency to think that there is something magical about it – there isn't.

Norman Schwarzkopf had had a bad experience with Special Forces in the Caribbean, was it not, Paddy?

Air Chief Marshal Sir Patrick Hine: Grenada.

General Sir Peter de la Billière: He did not want Special Forces deployed at all. The Americans were forbidden and kept back in America. They were not allowed anywhere near the theatre. As it so happened, we had Special Forces training in the UAE at the time of the war and they were positioned there just on the doorstep. So if there was a role for them, it would have been

a minimal effort to deploy them. Norman's arguments against Special Forces were that: 'If I put them, Peter, behind the enemy lines into Iraq and things go wrong, you'll expect me to rescue them. That will mean deploying my forces from the main attack at a most critical moment, and I do not want to be faced with that position'. I gave him an assurance that that would not happen – it didn't.

It is indicative of Norman's character and personality that, when we put on pressure to use our Special Forces, he eventually agreed – turning 180 degrees. Why use Special Forces? I do not think that that has ever really come out. I will tell you why. The Scuds were mobile. The Scuds were hidden, many of them in secure shelters under railways, road arches and so on. They could not be identified in time for the Air Force to take them on before they were back under cover again, so they had a facility, particularly at night, for fairly rapid deployment.

Israel was wishing to become involved. I cannot speak in detail about that, so perhaps politicians or Paddy would be able to do. A lot of work was going in, I understand, to stop them becoming involved militarily for obvious reasons. The Iraqis were threatening to move Scuds towards Israel. In fact, they did launch several on Israel, but only a few, in order to stir the political pot. The one way in which we could stop that happening was to get at them on the ground. The one resource that we had to do that efficiently and precisely, inexpensively and not at the threat of the main operation was to use the Special Forces to deny the Scuds mobility in their own country. That is what they did, and it worked. That is why the Special Forces were deployed.

Dr Robert Johnson: Will Sir William Wratten comment on the special contribution that Tornados made and say whether there were adjustments to the air plan caused by the Scuds issue or whether it was part of the overall shift of plan?

Air Chief Marshal Sir William Wratten: They had an unexpected and noticeable impact on Tornado operations in that, when we were first deploying and preparing for Desert Storm, we had LGBs¹⁵ in theatre. We were about to bring the Buccaneer into theatre, but at that stage the Saudi Arabian air bases were deemed to be full. They were not anything like full, but they were deemed to be full, so we had to observe what the Royal Saudi Air Force was saying. The only place we could put them was into Bahrain, which was already like a sardine can, within range of Scud – a target-rich environment.

Horner was most reluctant to see any more aircraft brought into theatre, particularly to that airfield and especially of a different type with all the support tail. So he gave not an assurance, but agreed that, when the time came, he would provide laser designation for Tornado LGB operations. Come the time, of course, what we had not expected was the impact of Scud on the F15 resources, so we did not have the laser designation that we anticipated and there was a hiatus, during which we operated with radar bombing from Tornado from medium level, with the predictable results, while plans were regenerated to bring the Buccaneer into theatre.

With the Buccaneer [and its Pave Spike designator pod] also came the Thermal Imaging And Laser Designating [TIALD] pod, which was strapped on to the Tornado, although it was still in its trial status, with considerable success. From my perch – a quite different perch from that of the Special Forces – the Scud was an essentially political nuisance. It was not a military threat to any degree. It had quite an impact on the perception of Tornado operations. However, all that was too difficult to explain to the press, so for a while we came under criticism.

Dr Robert Johnson: I shall artificially break up the air-land battle, although one of the characteristics of the campaign was the fact that such things were done together. I wish to turn to the conceptions of the land operations, in particular, and ask General Sir Rupert Smith to say something about his take on manoeuvrist doctrine, evolutionary implementation of that way of thinking and your plans as they evolved. Can you dwell, in particular, on the importance of that period of training that you managed to get in before crossing the start line?

General Sir Rupert Smith: I am not sure that I knew what the word ‘manoeuvrist’ meant then! It has grown in use. I had been a Divisional Commander for four days, when I was told to take my Headquarters out to Saudi Arabia. I was told that other forces – I would be told who they would be – would be sent out to join Patrick and his brigade who were already there. That was formally announced at the end of November, if I recall correctly. I was told that I was to do it right at the end of October, and that we would not get everyone out there until sometime in the early bit of January. What I had as a Division was not recognisable as such in any staff college wiring diagram or manual. It was what was available. Its primary equipment, armoured fighting vehicles – particularly the tank and the FV432, although we also had worries with the Warrior – were unreliable. They were both unreliable in their automotive systems and in the case of the tank, in its turret systems.

We were also having problems with the helicopter engines, because they did not have sand filters and the smaller Army helicopters, being low to the ground, were sucking in large quantities of sand and we were only getting about 20 hours an engine, which posed another set of problems.

The Division was heavy on artillery, not least by my request, and I do not think that this is ever properly understood, even at the time. By comparison to the Second World War 1944 armoured division which, by the way, only had two armoured brigades, I had 30 times the weight of high explosive under my own hands than my Second World War 1944 contemporary. It went a lot further, too. But just by adding up the throw weight of the shells, I had 30 times. If you want to compare that with the Second World War, you are much closer to being a corps reinforced by the Army Group Royal Artillery in terms of fire power. The other characteristic was that I was very light on infantry.

There was a logistic issue, where I had a fundamentally different view. That might explain one of the points about casualty estimations. Because I had all the equipment, there were no

other tanks to replace the ones I had. There were no other medium artillery pieces to replace the ones I had and so on. I had everything. The assumptions on which logistic planning is conducted is based on the fact that there is a Division, and it has so many tanks, and when it has a tank knocked out, it is replaced. You are always trying to supply the complete order of battle. But that assumption was not satisfied. I had them all, so every time I lost a vehicle my supply problem improved. I had less to supply! That applied to casualties. I found a lot of what was told to me about the casualty expectations incredible. I was going to run out of kit before men!

That coloured the way and how I thought that I would fight it, which will perhaps answer your question about doctrine. I was not going to fight for ground; I would only fight the enemy. I would fight for very small objectives – bite-sized bits – very quickly because the quicker you win, the less you use in resource and time. I would fight brigade by brigade. If I got the whole Division into a fight at one go, I had nothing left. I had to fight each brigade in turn, and I described it like a hammer drill going through a concrete wall. I had to do it very fast, at a high tempo. To do that and because of those logistic points, I organised the Division into autonomous groups: the artillery was autonomous; the brigades were autonomous and, within the brigades, the logistics were forward-loaded, so the battle groups were autonomous. That paid off a bit, as I shall describe.

All our understandings about movement and the preparation of the operation and our thinking were predicated on the single assumption that we would have air superiority. We could therefore get into huge pile ups of vehicles, which of course speeds up our going through breaches, starting the next attack, resupplying people and so forth. We could ignore the air threat, if we had air supremacy. If we did not have air supremacy, I would have to start dispersing and that would inevitably slow down the speed we moved at and supplied ourselves. Thanks to the Air Forces, we had that air superiority.

The other assumption that I was prepared to see fail was that the elastic band of my logistics could be maintained. My problem, unlike my fellow American divisional commander, was that I did not have corps headquarters attending to my logistics and the corps headquarters did not have the United States Army Headquarters attending to their corps logistics. My logistics were my problem and they always went back to the Port of Jubail and, even if I got to the Euphrates, they would still be my problem. I needed to hold all of that in mind. If that elastic band broke, I depended utterly on the Royal Navy, the hospital ship ARGUS and four LSLs¹⁶ loaded with ammunition, food and water for the Division in Chris Craig's train.

We were grouped, as you have heard, with the 7th US Corps, which had come from Germany and we had extremely good relationships with it, as had Patrick, as no doubt he will tell you, with the US Marine Corps before me. As for the preparation for the battle, we had to do three things all superimposed at the same time. We had to receive all the stuff being deployed out to us. That was being deployed in the main in shipping, but not exclusively. The shipping was

loaded on an administrative or commercial basis, not on an 'I, Rupert Smith, need it next' basis. But, of course, the deployment from Jubail into the desert would have to be done on the basis of how we thought we would fight the battle. So we had a difficult translation problem from administrative loading of gear to battlefield loading of gear to manage in the port. That, to the greatest credit of the logisticians, was managed.

We then had to deploy it all up into theatre where we were to conduct the fight. We had to prepare with 7th Corps for how we would fight and plan, and we had to train. We had to train for three primary reasons: most of the Division had not trained together at all; 7 Brigade had, but the rest of it had not. People needed to be acclimatised to the desert conditions and the various battle drills that we had developed. Finally, from memory, four or it could have been five of the units – three gunner regiments and one engineer regiment – were meeting equipment new to them off the ships. The MLRS Regiment had trained on its pieces as a crew, but the regiment had not trained as batteries or a regiment. The same was true with the fact that one regiment was converted, as it moved through the air to the theatre, from the Abbot to medium artillery, picked up its pieces as it got off the ship and started to train on the new equipment. It certainly applied to an engineering regiment as well. That had to be done, and unfortunately their equipment was late in the deployment process.

In the execution, the logistic arrangements paid off. It is not generally known, but the plan was changed as we were passing through the breach, doing a passage of lines which is difficult enough as it was through the United States 1st Infantry Division. As both Divisions were in the 18 lanes of the minefield crossing, the two Division Commanders were invited to change the plan, so that the Big Red One which was to remain in the breach and guarding it could come out of the breach and be included in the attack into the Republican Guard. The solution to the problem was arrived at by the two Generals without any of their staff present. The decision was that I would cut myself off from my divisional logistics and the empty lanes would all go to the Big Red One. You should have seen the face of my Chief of Staff when I told him!

It worked because I was in autonomous groupings and we were able, just, to not have divisional logistics until about 2 o'clock in the afternoon of the next day, when we linked up again. The intelligence support was poor to virtually non-existent and, because of the plan and the deception plan, I was hardly allowed to collect information on my own account. I depended upon other people providing me with the information for the attack. When we did attack, I ran out of my ability for collection. I did not have enough collection capability to move people ahead of me at the speed we were winning our fights and advancing.

Somewhere around 36 hours after we had started to attack, I could not see further forward than my leading battle group. But it was okay at that stage. I had caught up with all my reconnaissance. It was bad weather, I could not get my helicopters forward, but at that stage we were entering the pursuit and it did not matter. However, it was a lesson that I took away. If you want to attack, which I had not properly thought through, and if you succeed at a great

speed, you can outpace your ability to collect the information ahead of you. You actually need to be developing and have the capacity to develop your collection operation well ahead of you, much further than you first thought.

Lastly, the enemy was a poor lot really. Their morale had been broken by the air attacks. We should be careful what lessons we learnt about the particular fighting because, in my view, we were stressed more by our own boldness and our successes than we were by the actions of our enemy.

Dr Robert Johnson: Major General Sir Patrick Cordingley, will you give the Brigade Commander's view and even a reference to the issue of tempo?

Major General Patrick Cordingley: Just to go back a little in time because I think that it is relevant. When we first arrived, it seemed that there were three problems. The Americans, the media and how on earth do we set about training to become an effective part of a huge coalition army? I am not being rude about the Americans; I am being rude about ourselves. We had told the world that we had unreliable tanks and that we had withdrawn from the NATO tank-firing competition, and that had to be put right. In effect, I was forced out into the desert before my 12,000-strong brigade had all arrived. This was important; we could give confidence to the American Marines that we would be in the right place at the right time and we could show them that we were well trained. We could also give stories to the media that were worth reporting rather than the trivia that they were reporting when we were in the dockside, and we could get on with the training – training units that had been prepared to fight the Warsaw Pact to now do something totally different in the desert, and it was a significant difference.

During that time, we worked with the I Marine Expeditionary Force¹⁷ and became very much part of its organisation. I was indeed part of their O Group. So, by the middle of November, we were ready to go. We had all the extra tanks the American Marines wanted and the armoured engineers. But then we doubled in size and General Rupert joined us and we were moved to the US 7th Corps. To us in the 7th Brigade, that was something of a sadness. To this day, it is still a sadness. To us, from a strategic point of view, it seemed to attack straight into Kuwait and end up in Kuwait City was probably more interesting and beneficial to UK interests than going the long way round with the US 7th Corps and ending up in the desert. However, that is very much a personal opinion.

We then had to rejoin the British 1st Division and work up a different plan for how we would operate; there was a mental change going on. But we were very well trained. Also we were breaking a lot of equipment, as you have heard. Each time we broke a tank engine, we could not mend it in Saudi Arabia. It had to be flown back to Germany. Huge problems about training were building up, and I was hugely relieved to hand over all such problems to General Rupert [Smith] when he arrived.

I have only one other comment to make. We felt, as we went into the attack with the 1st Division, that we were well trained. We had had time to get together, and as the two brigades operated, we felt that it would work. What struck me, and I take the point about the Iraqis not being a very forceful enemy, was that, after 24 hours, they nearly stopped fighting altogether. But we were still using an incredible amount of force. After two days, I called in my commanders together and said, 'How are we to stop killing people?' It was very clear that we were killing a lot of people unnecessarily, but what is really difficult in the middle of an operation is to change the way you react when coming across an enemy position. So I am afraid that we went on using considerable force. My overall feeling at the end of it all is that we used unnecessary force against a weak enemy, but we did not know that when we started off. I am worried that this mindset continued in 2003, but that is another story.

Dr Robert Johnson: Thank you. That was very candid and very direct, which is exactly what we are after. I shall now ask a couple of panellists to reflect on their main concerns as the ground operations got under way.

Air Chief Marshal Sir Patrick Hine: After five weeks of air operations and particularly the last two of those weeks when a great deal of effort went into suppressing the Iraqi ground forces and cutting their lines of communication, I was confident that we were going to be successful and that it would not take all that long, but I was surprised, along with others, exactly how quickly Iraqi resistance melted away – or crumbled. He had prepared very well, dug-in positions along the Kuwaiti-Saudi border and we were not sure how much difficulty we would have in breaking through those positions.

General Schwarzkopf saw those operations as designed to be a holding operation to draw in the Iraqi tactical reserves and second strategic forces, while the real effort went through the wide, left hook with the purpose of engaging the Republican Guards Division, the key assets in the Iraqi Army to the west and north of Kuwait. I thought that we would be successful, but that we were so successful so quickly, particularly in breaking through those well-prepared forward defences, took me by surprise. My concerns before the operation started were, 'Will he use chemical weapons against our forces, particularly during the breakthrough phase?' We knew that he had chemical-tipped artillery rounds. That was the major threat, but we were prepared for it. But what would the impact be if he did use chemical weapons?

I was also unsure how hard the Republican Guard would fight against the wide, left hook and so forth. The answer, as you have heard, was not as hard as we had expected. But there was always the chance that they would and that we would be drawn into a bit of a battle of attrition with mounting casualties. The impact of having been there in the desert for several months by that time and having been pounded from the air over up to five weeks had certainly had its effect, as General Sir Rupert said, on morale. So fortunately, the ground campaign – masterly conducted, if I may say so – was all over in 100 hours. However, we should not forget

the impact on overall Iraqi capability and morale that five weeks of air operations had had in the run-up to that war.

Dr Robert Johnson: Sir William Wratten, did you have any particular worries?

Air Chief Marshal Sir William Wratten: Just one, and Sir Patrick has just alluded to it. It was an unforeseen and unanticipated move to chemical or biological operations by what was left of the Iraqi Air Force. I felt that we had almost seduced ourselves into believing that the Iraqi Air Force was no longer an issue and, as it turned out, that was correct. My personal concern – and I aired this to General Horner a few times – was that, if we did see a low-level penetrator armed with chemical or biological weapons making it to, for example, Riyadh, that would change the picture hugely.

On the coalition side and the Royal Air Force side, in particular, we would have to move back down to low-level operations very swiftly. Having educated air crew who had spent their lives at low level into the medium-level environment, we would have to reverse that and put them back down into the only real threat that Iraq had against low-level operations – and that was huge Triple-A, which was the cause of our losses, we think, in the early days. We are not sure about that, but it must have been very good odds against those losses falling to Triple-A.

Field Marshal Sir John Chapple: Another relatively small point brought up by speakers earlier this morning was the tank engines. That worried us a bit because their reliability had certainly worried Mrs Thatcher when she was Prime Minister. We had given her reassurances, put our head on the line and, as a result, we had taken the engines out of most of the tanks in Germany. That was only one year after the end of the Cold War. We had completely paralysed our NATO effort. Nothing could go to war there at all, should the Russians do anything. We had taken all the reconditioned engines off the shelf. We got Vickers to build some new ones, and we sent them all out there. Virtually every tank had about four engines spare somewhere along the line.

The only reason I have raised this is because it is the sort of thing we were worried about all the time, in case something went wrong. I went out there at the end, and talked to Rupert, Patrick and the guys on the ground and breathed a sigh of relief that they had managed to keep going so fast over the days of the land campaign. I spoke to Patrick's tank driver, 'Everything all right with the tank?' 'Oh yes', he said. 'Did you ever change your engine?' He said, 'Well, as a matter of fact, I did change it four times.' I thought, 'Oh my god, what have I done? Committed the Army to four changes of engine in five days.' Then I realised we might have forgotten the calibre and initiative of the soldiers under our command. He said, 'I knew there were new engines out there, sir, and I wanted to get one for my tank before I took it back to Germany, because I knew that I would never get one there!'

General Sir Rupert Smith: I might add that that was an advantage of the autonomous units. Most of those pack changes took place on the run, as did replacing the cards in the turret systems, and they did not have to go back to the workshops.

You had to repair the unserviceable pack as a workshop programme on a divisional basis as a second stage.

Dr Robert Johnson: We should reassert some civilian primacy here, I think. Lord Hamilton.

Lord Hamilton of Epsom: I did go to the Rhine Army¹⁸ during that time, and I have never met a more demoralised armoured corps. Of course, there was a war going on, and they were not part of it. When you visited their tanks, many of them were actually just blocks of steel sitting on piles of bricks. Even the tracks and the bogeys had been taken off them, as well as the engines and gearboxes.

As for intelligence, I saw the Ministry of Defence during the build-up and a rather interesting development happened. There seemed to be new Iraqi Divisions appearing, so I said to the intelligence people, 'How many men does that represent'? There was a terrible pause. They could not really make up their mind. There were no new Iraqi Divisions. What Saddam Hussein was actually doing was pretending. He knew that his communications were being intercepted, so he pretended there was another division there. It never existed at all. That might be useful for the future.

Lord Powell of Bayswater: This has obviously been a military session, and very brilliantly it has been handled. But we should perhaps reflect on what was going on at the political level and the ultimate direction of the war. The first thing to remember is that, quite apart from the war in Kuwait, a war was going on within the Conservative Party, which resulted in Margaret Thatcher stepping down and John Major taking over.

On the whole, it is not recommendable to change the national leader two months ahead of a war, but that is politics for you. There were some genuine reasons for concern at the time. Let's face it, the choice of John Major was a surprise to the nation. It was probably a surprise to the Tory Party. I am absolutely sure that it was a surprise to him! He had no defence experience, no experience of war. He had served for three months at the Foreign Office and intensely disliked it. He had never met President Bush, our main ally in the war. Let us say, physiologically, he was very different from Margaret Thatcher, who could last months if not years at a time on three hours' sleep a night. John Major needs eight hours' sleep as a minimum to get by.

Most of those misgivings were actually completely unwarranted. First, John Major made no attempt to change the strategy or the objectives. He was absolutely firm that Saddam Hussein had to meet all the requirements of the United Nations resolutions in all respects. There was no letting him off the hook. There was a lot of pressure, particularly from the Labour Party

and Parliament to say, 'Well, if he pulls back halfway, perhaps we should abandon the whole enterprise'. He refused to get involved in some of the diplomatic tricks that were being tried, whether it was President Mitterrand¹⁹ suddenly coming up with an initiative to solve the whole crisis. John Major had spent the morning with him in Paris. I had been there. Mitterrand made no mention of the initiative; it was announced later that afternoon, which showed how easy it was to do business with the French.

John Major maintained pretty much the same process. Margaret Thatcher had insisted on a very small War Cabinet, going back to her experience of the Falklands. In particular, she insisted on excluding the Chancellor of the Exchequer on the grounds that all he would do would moan about money. She was absolutely right about that. John Major slightly extended the War Cabinet, and brought in the Cabinet Secretariat, which Margaret Thatcher had banned from participation. Above all – this is the most important part – he was an excellent communicator for the circumstances. His ability to explain to the British public, the Churches and many others, why we would have to go to war was really remarkable and very successful, including his final television broadcast ending with the words, 'God bless', which I had opposed two minutes before on the grounds that it was naff. He was absolutely right. It struck completely the right note.

One last point: John Major went to Washington on 21 December for his first ever meeting with George Bush to discuss the war aims. There was immediately complete understanding between them. The plan had been to go to Camp David by helicopter to discuss it all. The weather intervened. We could not helicopter to Camp David. We travelled up in the President's limo with President Bush and John Major sitting on the back seat, and General Scowcroft and myself on the jump seats facing them. Virtually all the final decisions relating to the war were taken on that ride – in particular, the date on which the military operation would start.

The scale of the political problems that George Bush still faced was very clear. In particular, he had to be able to show that he had made one last effort with the Iraqis directly to get Saddam Hussein to change his mind. That was actually the last thing that he wanted to do, but it had to be done. That, of course, led to the meeting between James Baker and Tariq Aziz in Geneva. We all sat at home and I am sure that the President sat at the White House hoping that it would fail because it would never have been a clear-cut solution, and it did fail.

On the starting date, President Bush and the Prime Minister said that no one should be told. Well, that is a bit of a problem. We have always had difficulty with information, which we are not allowed to tell anyone, and it was held at the political level certainly as a complete secret until the last moment. I told Douglas Hurd, who was Foreign Secretary at the time, with about 45 minutes to go before the bombing started. It was intended to be two hours before, but the bombing started early.

My overall point is that John Major turned out to be a very good leader in the political sense in the Gulf War. Indeed, probably his first six months of his Prime Ministership were the best of the whole period, certainly in the eyes of most people.

Dr Robert Johnson: I notice that we are one minute over the hour for afternoon tea. We are left with a moment of poise. We have armour racing across the desert and have joint fires streaming on the remains of the Iraqi positions. We have oil wells raging ablaze and, on that note, we shall ponder on that moment. After we come back, we will be looking at the closing stages of the war and some of the aftermath.

Notes

¹ <http://www.raf.mod.uk/history/AirPowerintheGulfWar.cfm>.

² Operational control.

³ United States Navy Commander, Task Force.

⁴ Admiral Stanley R. Arthur, US Naval Forces Central Command during Operation Desert Storm, 1990-1.

⁵ British surface to air guided missile system used by the Royal Navy, 1973-2012.

⁶ Sea Skua: lightweight short-range air-to-surface missile designed for use from helicopters against ships.

⁷ <http://www.royalnavy.mod.uk/our-organisation/the-fighting-arms/royal-fleet-auxiliary/casualty-ship/rfa-argus>.

⁸ Sir Andrew 'Sandy' Wilson, Commander British Forces Arabian Peninsula (In-theatre commander for Operation GRANBY), 1990.

⁹ Khalid bin Sultan, Saudi Arabian Assistant Minister of Defence and Aviation.

¹⁰ Charles XIV John (Jean-Baptiste Bernadotte, 1763-1844), King of Sweden and King of Norway, 1818-44.

¹¹ The Battle of Leipzig or Battle of the Nations, 1813, between Napoleonic France and the coalition of Russia, Prussia, Austria and Sweden.

¹² General Charles 'Chuck' Horner, US Commander, Ninth Air Force, 1987-92. Joint Force Air Component Commander.

¹³ Grumman F-14 Tomcat; US Naval fighter aircraft, in service 1974-2006.

¹⁴ NATO reporting name for Chinese Hai Ying (HY-series) anti-ship missiles.

¹⁵ Laser Guided Bombs; the RAF employed a single type of LGB, namely the 1,000lb Paveway II weapon during Operation GRANBY.

¹⁶ Landing Ship Logistic.

¹⁷ I Marine Expeditionary Force, the 1st Marine Division.

¹⁸ British Army of the Rhine.

¹⁹ François Mitterrand (1916-96), President of France, 1981-95.

Britain and the 1991 Gulf War Witness Seminar

16 March 2011

Cormorant Hall, JSCSC, Shrivenham, Wiltshire

Session 3:

16:00-17:30: Discussion of the Aftermath of the Conflict

Dr Robert Johnson: We shall now march on with the *tour de force* of this particular campaign. Let us go straight to the action and, first, look at British policy at the point of conflict termination as it was being contemplated. Lord Powell, will you start us off by giving a picture of the political view of how and when to stop the war?

Lord Powell of Bayswater: I shall help you try to do that. The ending of the war came as a very great surprise to the Prime Minister and No 10. I was telephoned in the evening by General Scowcroft from the White House saying, 'You're not going to believe this. They want to stop'. I asked him what he meant, to which he replied, 'The military want to stop the war now. That is the way it is going. You had better intervene if you don't agree'. Obviously, we discussed it within government and with the Prime Minister and he, too, was very surprised that the decision had been taken so rapidly and decided to put a case for going on for another day or two in the hope that more of the Republican Guard could be destroyed, even if *[they]*¹ crossed the border in Iraq. By chance, Douglas Hurd was in Washington at the time and we asked him to go into the White House and argue that case. He did so, but there was nothing for it. It was quite clear that minds had been made up. One of the reasons has obviously been mentioned – gallantry. Soldiers do not like killing people who have their backs to them or are running away. That is understandable, but very polite. Perhaps politicians are just more bloodthirsty than soldiers in the end.

There was a lot of pressure from the PR people. A 100-hour war, and that sort of stuff sounded awfully good. It probably helped the President with Congress, too. At the political level, however, it caused a lot of concern in London. It came as a big surprise. It was not just that we did not know it would happen in that way and we were caught by surprise, but that the actual ceasefire was extremely ill-prepared. There had been very little discussion of the terms and the shape of a ceasefire, and what would happen. People were just about beginning to get round it. You do not normally start discussing the ceasefire after three days of war. You expect it to be going on for a week or two at the least. There was really no detailed planning about what should be the elements of a ceasefire.

As a result, it must be said that a lot of catches were dropped in the process. That is the fault of politicians not of the military in the sense that Saddam Hussein should certainly have been more publicly humiliated. Being allowed to send a mere Major General to sign a ceasefire was not nearly enough. Various conditions that could have been imposed at that crucial moment, such as not allowing him to fly helicopters, could have been imposed then, but were not and could not have been later. In that sense, we had a failure after a very successful war in the terms of the ceasefire. Your papers asked, 'Were British war aims met'? Of course, the broad war aims were certainly met. We have ejected Saddam Hussein from Kuwait and did a lot of damage to his military machine and, as everyone has said, those were our main aims. As I said earlier, it was never part of our aim to go to Baghdad both because it was not part of the agreed strategy of the coalition and in military terms, I imagine, the very extended supply lines that would have been required would have made it technically difficult to do.

You also asked, 'Was the survival of Saddam Hussein anticipated'? No. At the political level, the general assumption was that, even within an inadequate ceasefire, he would have suffered such a defeat that he would have been forced out of office, assassinated by a fellow General fairly rapidly or something like that. It was a nasty surprise when he managed to survive for another 15 years. Your last question was, 'Did the conflict allow Britain to punch above its weight militarily and diplomatically'? The answer to that is unreservedly yes. Militarily, undoubtedly so. The performance of our forces was absolutely outstanding. It was widely recognised throughout the world as such, and by the Americans judging from anything that President Bush, Baker and Colin Powell² and others used to tell us. Politically, we got a lot of credit, too, for having been there from the beginning. At the first meeting between Margaret Thatcher and George Bush, we were in the lead in knowing what needed to be done, and that was greatly to our advantage in international reputation.

Lastly, I suspect that it was probably the first war at least since the East India Company was fighting wars in the seventeenth and eighteenth centuries that we actually made a profit! As you know, the Kuwaitis, the Saudis, the Germans, Abu Dhabi, Qatar and Dubai all chipped in, and at the end of the day our costs were met.

Dr Robert Johnson: I shall ask almost the same question about the understanding of British policy or the contemplation of conflict termination of Air Chief Marshal Sir Patrick Hine at Joint Command Level.

Air Chief Marshal Sir Patrick Hine: I was equally surprised when Norman Schwarzkopf rang me some time on 27 February to say that the US President had decided that the war should come to an end. In other words, he would suspend all offensive operations with effect at a certain time. I think that it was 0400 on the 28th. I said that it seemed he had stopped the war a little bit too quickly because, within 24 to 36 hours with any luck, we would have completed the encirclement of Iraqi forces in the Kuwait theatre of operation and been able, in accordance

with one of our objectives, to destroy his tanks, artillery pieces, armoured fighting vehicles and so on, and then let the humiliated army personnel go home.

Colin Powell was very influential in the decision taken by the President. He was much disturbed by what he saw being reported as a turkey shoot, when American Air Forces in particular were destroying a large convoy of both military and civilian vehicles fleeing from Kuwait City in the direction of Basra. Powell's view was that, having won the war spectacularly, we were in danger of losing the peace because we were killing thousands upon thousands of Iraqi Arabs unnecessarily. That was Powell's position. I said to Schwarzkopf, 'Why didn't you say? We would stop that kind of air operation and the defensive air operations would only be used if coalition forces came under direct air attack or direct attack'. He said, 'It's too late for that. Powell has convinced those at Washington that we should bring the thing to an end'. That was unfortunate. We did lose an opportunity of completing the encirclement and totally humiliating Saddam Hussein.

I am not sure that there was a thought in Schwarzkopf's mind that it had all gone extremely well so far. After three days, the objective was secured. The coalition and, in his case, particularly the Americans, had sustained very light casualties. There may at the back of his mind been the thought, 'Well, if we keep on with this and try to encircle them, the Republican Guards will fight a lot harder and we will lose more people, perhaps unnecessarily'. I had a hunch that Schwarzkopf was quite happy with what Powell was proposing in Washington.

Was the survival of Saddam Hussein anticipated? Most of us at the time felt that he had suffered such a humiliating defeat that the more moderate people within the army would rise up and overthrow him and, hopefully, a more moderate general would become the new leader and begin to lead Iraq back into the international fold. That might have happened in the first two or three months because he was quite vulnerable in the immediate aftermath of the war, but then the Shias rose up in the south, the Kurds rose up in the north. There was a danger of Iraq totally disintegrating into chaos and, for those reasons, the Armed Forces got in behind Saddam and did put down – in the case of the Shias – those uprisings.

There was no question of our going on to Baghdad to depose Saddam Hussein, as Charles Powell has made very clear. I had been involved in discussions with the FCO, Cabinet Office and MOD with our opposite numbers in Washington on two or three occasions in the run-up to the war, when the Americans had agreed entirely with us that it was not a question of regime change. They entered one caveat to those discussions: if he used chemical or biological weapons against American forces and inflicted heavy casualties on them, they would have to get him by the scruff of the neck and do something about it – but only in those circumstances and, as you know, they did not arise. I agree entirely with what Lord Powell said about punching above our weight, militarily and diplomatically. We did. One of the secrets of that was the integration that we had at all levels of command with the American forces and leadership. Yes, we came out of it very well.

General Sir Peter de la Billière: I was approached by Norman Schwarzkopf one afternoon and told that the war was coming to an end the next morning with a ceasefire in Safwan. He then offered me a lift in his aeroplane and we flew in probably the second aeroplane into Kuwait Airport with the oil fires blazing. There was masses of smoke, no airport control with a lot of it in disarray and destruction. We went to Safwan together with General Prince Khalid, who was the Commander-in-Chief of the Saudi Armed Forces. The thing was thrown together hastily in a series of small tents. I was not at the top table. I was put back on a chair just behind Norman, so I could not join in with the actual negotiations. Norman did not give me the impression that he particularly wanted to pack up, but I might have got the wrong end of the stick. The talks were with an Iraqi general on the one side and a couple of sidekicks and effectively Khalid and Norman Schwarzkopf on the other.

We need to be clear that it was a ceasefire, not peace talks – and that was all: lines were drawn on the map, stop where you are and no more shooting. The matter of helicopters was perhaps featured large in the debate because the coalition forces had destroyed pretty well all the bridges in Iraq at that stage, so there was no means of controlling the country. The Iraqis made several other requests, all of which were turned down by Norman [Schwarzkopf], but he did agree that they should have limited access to helicopters in order to maintain control over the country until the bridges were reconstituted. The only missing element was that no requirement was built into that to stop them being armed and that was really where we started to go down the slippery slope.

The talks lasted about an hour to two hours at the moment, broke up and we all went back. When I reflect on it, I feel – picking up the point that Paddy brought up just now – that we ought to have humiliated Saddam Hussein and insisted that he went to the ceasefire talks. I believe that might have made all the difference to his position in his own country. Anyway, he did not. The plans for Baghdad were non-existent. It is an important post-war issue that there were no plans to my knowledge – perhaps Charles Powell might put me right – for governing Iraq. That was because there was no requirement to go to Baghdad. It was a United Nations-sponsored operation. We were to liberate Kuwait and call it a day. Had we gone on, I think that we would have had similar sort of chaos to that we experienced some 12 years later. It was therefore the right decision.

Furthermore, the American armour – Rupert can put me right on this – had much more limited range than ours, and for them to get to Baghdad would have been a major operation in that they had to get their logistics to provide sufficient fuel whereas our tanks could have done it in one. Is that right?

General Sir Rupert Smith: It is not quite as easy. Their tank has a turbine engine that uses much fuel, whether it is stationary or running, and the mark at the time did not have an auxiliary power unit. You had to turn the main engine on even if you were static and just wanted to power up the radios. The result was that it used an enormous amount of fuel in

comparison with a Challenger. It was not that its range per tank was that different, but the problem was of resupplying that sheer quantity of fuel. It had stretched them to supply those two huge armoured divisions in 7th Corps, the 1st and the 3rd US Armoured Divisions, as well as their other three major formations. It had been a major exercise and one of those divisions – the 3rd, I think – was running out of fuel just at the time the ceasefire had been called.

Dr Robert Johnson: I will move you back from the desert for a moment because I do not want to lose sight of the issue about when conflict termination was decided. Lord Hannay, was a UN, international perspective being fed into the UK Government and the US Government at that point?

Lord Hannay of Chiswick: Let me just step back a few paces because one or two speakers have touched on the diplomacy of the war. It is worth saying that President Bush's decision to offer the Iraqis a last chance and a meeting – Tariq Aziz and Baker – in January was in UN terms an absolute blinder. It first enabled the President to say that he was going the last mile for peace and so on, which was good talk, and, secondly and far more important, it prevented anyone else from getting into the mediation game.

Five weeks were taken out of a six-week period in which the Americans remained in complete control of the agenda and that was hugely valuable. The last week was the one when the luckless UN Secretary General was sent off to Baghdad very unwillingly, but we perhaps exaggerated the risk from the French. They tried in New York to get him a mandate to mediate, and that was blocked by the other permanent members – we and the Americans – so the matter never even went to the full Security Council. So the idea that there was a French Plan B, well, I think that there was a French pirouette, which was designed to show their own public opinion that they had tried. But it was not a serious effort.

During the hostilities, the job of diplomats was to hold the ring, not to try to be clever. We had to stop anyone who wanted to dash to the Security Council and call for a ceasefire from doing so. That was what we succeeded in doing reasonably well, with a lot of help from the Saudis and the Egyptians. Various Maghreb countries and others tried, but they never actually got to the Security Council until close to the end of the bombing period. They wanted to call for a cessation of the bombing.

When the war ended, it was still completely unclear at the UN what would happen afterwards. There was no indication of thinking from London, Paris or Washington as to what should happen afterwards. The first sign, which came with the ceasefire agreement in Safwan, looked as if it meant what everyone expected, which was that the post-war terms would be dictated by the three countries that had operated together with their Arab allies and would not come close to the United Nations because the Safwan terms were simply served up at the United Nations and rubber-stamped in a resolution with it being made clear that no one could change a comma in it.

In fact, the stopping of the war at that stage was in UN terms of benefit to us tactically because it looked – as was in fact the case – that we were reasonable and that we were sticking to the terms of Resolution 678, which had authorised the use of force. On the 678 point, I want to pick up something from the recent discussion. It is not the case that the UN objective was simply to get Saddam out of Kuwait. There was a two-pronged objective under 678. It was to get Saddam out of Kuwait *and* to restore peace and security to the region. Since the second of those prongs was the basis of British and American policy for the following 12 years, it was quite an important prong.

Once the Safwan terms had been rubber-stamped by the Security Council, again we were all in the dark in New York as to what would happen next until about two days later when a telephone call came through simultaneously from Washington and from London saying that the Prime Minister and the President had decided that the whole thing would be done by the United Nations, and that we would be playing the role that we had as a permanent member and would be working out the terms of the peace settlement. Out of that came a month of extremely hectic negotiation that led to the famous mother-of-all resolutions, Resolution 687, which laid down the post-war terms for Iraq. There are not many UN resolutions, which produce three international organisations and a few other things, too, all in one go. But that one did, and if we analyse it, it was remarkably successful.

The Resolution [687] laid down a process for determining for the first time and getting Iraq's formal agreement to it, the Iraqi-Kuwait frontier, both the land frontier and the sea frontier. It laid down a process for dealing with the costs of the war and having them borne from Iraqi oil exports. That meant that massive compensation payments have been made to a large number of countries, which were damaged by the war including India, Sri Lanka and others, which had to repatriate hundreds of thousands of their nationals. Above all, it set up a process of coercive disarmament that led to the United Nations Special Commission – UNSCOM – for removing or certifying that all Saddam's weapons of mass destruction (WMD) were useless.

Well, we now know that that process also was successful. We did not think that it was, and I am not casting any aspersions on the reality in 2003 of our belief that Saddam still had some WMD but we now know that he did not. The reason that he did not was that we had destroyed a lot of them in the war and the ones that were not destroyed then were dealt with by UNSCOM. That was a fairly remarkable achievement. It was a completely unprecedented approach.

My last point about the diplomacy of the immediate post-war period concerns the issue of Saddam's attack on the Kurds and the Shia. It broke on a startled Security Council, like everyone else, at about the end of March just when the big resolution on post-war Iraq was about to go through. The British Government took a courageous view, in my opinion, and the correct view that they could not simply just sit by and allow such appalling events to unroll and do nothing about them. Moreover, such events were destabilising a NATO ally, Turkey, because hundreds of thousands of Kurds were fleeing across the mountains in appalling

conditions. Out of them came Resolution 688, which demanded that Saddam ceased oppressing the Kurds and the Shia.

However, because of the remarkably interventionist nature of the resolution, it was not under Chapter 7 and did not therefore contain any authorisation for the use of force. It worked for the Kurds, but it did not work for the Shia, which was more to do with geography and the propinquity of a NATO ally's border, as opposed to the Shia who, of course, were up against the Iranian border, than it was to anything else. In spite of that, it enabled the coalition – the British, French and the Americans – to institute the two no-fly zones in the north and the south of Iraq, which were sustained for 12 years until 2003 without any explicit authorisation from the Security Council. They were sustained on the basis of the terms of Resolution 678, which authorised the use of force in the war and by Resolution 688 on the Kurds and the Shias, which did not have the power to provide a legal basis in proper terms for the use of force. It is interesting in today's terms to think of that.

Dr Robert Johnson: Before we leave the diplomatic and political sphere, it is interesting to reflect on the consequences of the war, the war termination and the UK relations with the Arab world. Sir Alan Munro, is there something to be said about UK relations with Saudi Arabia? We have not mentioned the critics' view of the war, which was that it was a 'war for oil', but was that a consideration for you?

Sir Alan Munro: Yes, it certainly was. It was said in an earlier debate in the House of Commons that, if Kuwait had grown carrots, we would not have turned a hair. No doubt, the oil factor featured in such discussions. Out of the war came a closer and more mutually beneficial, profitable relationship between the United Kingdom and Saudi Arabia than has probably ever pertained since the creation of the Kingdom. That very good relationship was sustained, as it was indeed with a grateful Kuwait. We reaped a considerable peace dividend out of our performance and a successful outcome.

I want to say something about the critical recovery by Saddam Hussein of authority and how the emergence of the Shia revolt helped to drive some of his highly disaffected by then remnants of an army back into his arms. There was an Iranian ingredient, which matters. The Iranians had been harbouring a vengeful Iraqi-Shia irregular corps for a number of years known as 'the Brother Brigade'. Those exiles from Saddam Hussein had been pressing in the wake of the defeat to go back and put paid to the whole affair. The Saudi Foreign Minister, Prince Saud said, 'We have been presuming that Saddam Hussein will one way or another be ousted by his disenchanted people' – what I call the Galteiri³ factor, going back to the Falklands. We placed considerable hopes on that.

Saud made the point that, if those vengeful and bloodthirsty Shia exiles were let back in, they would reap a degree of havoc, which might turn around those Sunnis and military elements who at that point had sympathy with ousting their leader, and that Saddam would take

advantage of it. He asked if there was anything we could do to deter the Iranians from releasing those dogs of war. We agreed, and Douglas Hurd who was in New York at the time spoke to Larijani, the Iranian Foreign Minister,⁴ who was there also and said that he should keep on a leash such folk while the Iraqis in the country dealt with their leader.

The assurance came back, duplicitous, from the Iranians that we could be sure that no Iranians would cross the frontier. That was not the answer needed. Indeed, the 'brother brigade' was unleashed, went in, got out their knives and Kalashnikovs and started to create great bloodshed. That had a partial effect in scaring elements that were already deeply disenchanted with Saddam back into his arms and enabled him to restore his authority.

Dr Robert Johnson: I have been remiss not to ask Air Marshal Ian Macfadyen to talk about the chief staff commander headquarters, British Forces Middle East. Perhaps this is an opportunity not only to talk about termination of the conflict, but about logistical arrangements and the difficulties he faced.

Air Marshal Ian MacFadyen: I wish to make some observations about what has been said earlier, particularly about battle damage assessment. As you heard from Air Marshal Wratten, the requirement was to attrit the Iraqi Republican Guard Divisions to 50 per cent before the ground war would start. That became a key part of daily planning. General Schwarzkopf, in particular, always wanted to know how many tanks and armoured vehicles had been knocked out a day. They started off by getting piles of reports on it, and the Americans set up a system that they graphically called 'Kill Boxes'. They used to send the same pilots into the same 'Kill Box' to attack repeatedly whatever they could find by way of targets of opportunity into well dug-in Iraqi armoured vehicles.

Initial pilot reports said that more than 100 tanks were knocked out within in a particular 'Kill Box'. Some aerial photography was started to confirm that, and the reports that said more than 100 were knocked out actually boiled down to 15, when it came down to the photographic interpretation. That meant immediately that there was a real problem in assessing how we were doing. That task then fell to the Joint Intelligence Photographic Interpretation Cell [JPIC], a command set up in Riyadh with the American Air Force, Army, Navy and Marines with a largely British Royal Air Force element within it. The Air Force was a targeting cell and it was tasked with assessing how the damage was being done. One young RAF officer set about sorting the whole thing out – because four different arms, using four different methods were working within the JPIC. He drew it all together and remarkably towards the end of the war, 85 per cent of the work of the JPIC – originally designated as a targeting cell – was in Battle Damage Assessment. The lesson is that you must ask the right questions to get the right answer, otherwise you could be badly advised.

As for the air war and the Iraqi morale, it is not generally understood just how much of a propaganda war took place. United States F-16s dropped more than six million leaflets on Iraqi

ground forces. The Air Force also conducted aerial broadcasts from C-130 aircraft. We had British interpreters in a cell that was planning broadcasts in Arabic both for the C-130s and through an elaborate system of loudspeakers on the ground. These speakers could be heard up to 25 kilometres inside Iraq or Kuwait. They were broadcasting 24 hours a day producing propaganda, telling people to surrender and come across the border. Indeed, I am sure that General Rupert and others will agree that quite a lot of Iraqis surrendered across the border before even the ground war started.

I recall a story that reflects on the style and brilliant leadership of General Chuck Horner, the commander of all air forces in theatre. It concerns the day that Margaret Thatcher resigned as Prime Minister. He announced at the end of morning prayers one morning, 'I've got some bad news and some good news. The bad news is that Margaret Thatcher has resigned as the British Prime Minister. The good news is that she has signed up to join the British 7th Armoured Brigade'. I sometimes think that, if she had done, Saddam would have gone home straight away.

Dr Robert Johnson: Thank you. I apologise for not bringing you in earlier. Admiral Wilcocks, will you give us the Royal Navy dimension? I imagine that the war ending was just a change of status or more continuity for you.

Rear Admiral Philip Wilcocks: I think that Chris would be able to answer better. At that stage, I was being withdrawn, having been under threat for six months.

Captain Chris Craig: Thank you, Philip. We were penetrating the Kuwaiti minefields two weeks before the land assault commenced. It was substantial. The intelligence was flawed. We did not have the positions. That cost the Americans dear. They lost two major ships out of the line as a result of mine depths. They had, in fact, laid 1,280 sea mines. Intelligence told us 300, which made a frisson of entertainment for all the MCM forces. That continued. We cut a route through to the coast. The battleships, MISSOURI and WISCONSIN, entered them, carried out the bombardments and supported the land advance. We continued clearing the minefields. I will not roll out beyond the time frame the Chair wants, but perhaps I will.

We went on clearing the approaches, the sea lanes and the main ports for a further four and a half months before they were all declared clear. Most of the ports had been savagely booby trapped. IEDs were in profusion. There were a lot of beach mines as well as the moored and the ground mines, and the Royal Navy was much involved with those up until the end. You have heard about the neutralisation of the Iraqi missile patrol craft by the Lynx and the Skua and about the fact that we were continuing to provide replenishment primarily to our American cousins, as we did that work. That summarises the final stages of the war from the Navy's point of view. We felt that we had perhaps punched a little above our weight.

Dr Robert Johnson: We now have the opportunity to reflect briefly on the impact the war had on the Armed Services themselves. We hear a lot about 'Options for Change' and the

consequences of the war, so can I ask first Admiral Sir Julian Oswald to talk about the Royal Navy's position after the war, and Air Marshal Sir Peter Harding, and talk about the change in the character of war, which is a subject close to my heart.

Admiral of the Fleet Sir Julian Oswald: Thank you for the opportunity, but to be absolutely frank, I do not have much to add to what has been said today. We learnt a lot of lessons. We were relatively pleased with the performance. We were very pleased about some of it, but there were weaknesses, which I hope are being addressed.

Air Marshal Sir Peter Harding: One of the best moments of my career in the Service was that, after the Gulf War, we invited all the commanders, flight commanders, squadron commanders, station commanders and senior commanders as well as senior staff officers to Cranwell to have a day's wash up. Various presentations were given by squadron commanders et al. It was one of the best days for me because the spirit that the Service showed on that day was extraordinary. 'Options for Change' was not figured largely in people's minds at the time. It was a job well done. People had flown extremely well on all their missions. It underscored yet again that if air power is used sensibly by a joint command – in this case, it certainly was – it is a war winning capability in itself.

It is fair to say that the Pentagon issued some figures about a week after the air campaign started to say that one third of all the Iraqi tanks, one third of their armoured vehicles and one third of their artillery had been destroyed by air alone. But, of course, all that is backed up by a large naval contingent out in the Gulf by a huge ground force. One of our wags did say, 'We all know that you can't win a war in the air alone'; then he said, 'But we very nearly did!' I thought that was rather fun; it lifted everyone's spirit. 'Options for Change' came later and people began to wonder if we would have to do even more than a Gulf War to show that what we had was worth having and should not be cut about. The one thing that worried all of us, especially John, my colleague in the Army, was that he was – as I was – disbanding squadrons and units that were actually fighting in the war because we had to have a system to ensure that the ones that were disbanded were the fairest ones to go, such as the last we set up, and that was difficult. It is the biggest high point that I have ever seen the RAF in and we were very pleased to take part.

Field Marshal Sir John Chapple: I have three or four things to say about the after effects for the Army. In 'Options for Change', there had been great debate about whether we should retain a high intensity warfare capability – the Cold War having finished – and the campaign settled the fact that we needed to keep in low and medium and high intensity capability. Secondly, we needed to retain an operational level of command. In effect, that means a Command at Corps level. That was done during the subsequent 'Options for Change' deliberations only a couple of months after the end of the ceasefire by setting up (with a little sleight of hand) the Rapid Reaction Corps. We sowed the seeds of that as being a good idea; and when the Ministers asked us what we thought of it, we said how we thought it was a smashing idea and that we

would provide the commander. We have done so ever since. We have kept that level of Corps Command in the Army, which has been professionally of great benefit.

The campaign emphasised the role of reservists and Army volunteers. We were grappling with that under 'Options for Change', and we are still doing so today. But their role was absolutely critical and we could not have provided the support for Rupert, Patrick and Peter in the Gulf without a lot of reservists.

Captain Chris Craig: I want to add a postscript, albeit not a glamorous one at this stage in the debate. It would be a travesty if we did not put some numbers on the logistical achievement of the UK sea train: 146 ships; 6,500 miles. They carted 360,000 tonnes as against the air figure of 53,000 tonnes and, by any standards, that was another remarkable achievement not to be overlooked. For some intra-Navy propaganda, similar attention should be paid to the unglamorous process of enforcing the embargo operations: 7,000 ships were challenged; 800 were boarded and checked; 36 were diverted and 1 million tonnes of suspect cargos were all impounded. That, again, fitted very well with the gradual wind down of diplomatic pressures on the Iraqis at a key stage.

Dr Robert Johnson: We must not lose sight of the important elements that always get missed out in studies of conflict, such as logistics. However, what kind of armed forces are needed for the next war? Given that we have experienced a couple of 'next wars', can I call on General Sir Rupert Smith, the author of *'The Utility of Force'*⁵ to say something about what our adversaries learnt about the nature of the conflict? Just before General Sir Rupert makes a comment, I wish to thank the panellists who have other engagements and must leave early. Thank you, gentlemen, so much for your contributions today.

[Applause]

General Sir Rupert Smith: You might find that this answer will take us away from the war that we are studying into Whitehall and later decisions in the decade, but it is connected.

As Sir John said, we came away from an understanding that we needed to maintain such a competence. But then we eroded the ability to do what we had just done in 'Options for Change'. We took away most of those things that had made it possible and reduced the quantity of artillery, reduced petroleum units and so on. We learnt half the lesson as an Army and as the MOD. We did not take the whole thing on board. Then later in the decade, while I was in Bosnia, a paper appeared called, 'Two Views of War'. It was a discussion document in its origins produced by the doctrine world. It said that we had two extremes before us: something like the Gulf – armoured, manoeuvre, high intensity, although I personally dislike that phrase because I do not know what intensity is being measured – and the low intensity, peacekeeping and Bosnia. In our straightened circumstances of around 1996, that was taken as an argument for organising our forces and available resources.

We deliberately split the Army into two – a half that could do the one, and a half that could do the other view of war. I said at the time that I thought it was a failure in generalship because, if we only have 1,000-man army, we had bloody well better organise ourselves so that we could use the whole of them, but to deliberately divide the Army so that it could only be used in two halves was to fail to use all the force. In Northern Ireland at the time I was saying this, I was representing the other end of the spectrum from the Gulf. The argument was lost. The Army was organised that way, and that is the reason why the chicken came home to roost in 2003. We started to organise the Army and to argue its use on the basis of a half-learned lesson from the conflict 12 years previously.

Dr Robert Johnson: I shall now be slightly radical and get some audience participation. We have covered quite a lot of the chronology of the war and the issues, but there are many more things to discuss. It is only right that members of the audience should have the opportunity to participate. If you wish to ask a question, will you raise your hand and then stand up? We do not want to identify you and show you up, but it is merely so that the gentlemen at the back who are keeping all this on the record can make sure that the microphone is switched on close to you. Will you please say who you are and what you represent? Are there any questions?

Wg Cdr Jeff Jefford: I am with the RAF Historical Society. My question was really for Lord Powell, who has just left. He said that we threatened Saddam Hussein before it all started with something desperately awful if he went CW⁶. Did we actually think that through? What were we going to do?

Air Chief Marshal Sir Patrick Hine: I can pick up a bit of that. There was a meeting between Jim Baker, the US Secretary of State, and Tariq Aziz, his Iraqi counterpart in Geneva quite early on in January 1991, during which Baker made it abundantly clear that, if Saddam were to use chemical weapons and/or biological weapons against the coalition forces, there would be a massive response in kind from the Americans. He never had to spell it out because Saddam and Tariq Aziz realised that the American carriers, for example, were carrying nuclear weapons and, ultimately, Iraq might receive one or two of them in response to the use of chemical weapons. That message was taken on board, and it was probably one of the main reasons why chemical weapons were not used against the coalition forces. It was a pretty specific warning.

Air Chief Marshal Sir William Wratten: Can I add something at my level, as the Air Commander? Not being privy to the information that Paddy has just divulged, I raised the matter with General Horner during one of our countless discussions before it started. I asked that precise question. He said, 'Baghdad will cease to exist'.

Farzin Nadimi (University of Manchester): One puzzling aspect of the war was the flight of the Iraqi Air Force to Iran. How was that move interpreted and analysed by the coalition? Were contingency plans in place in case the planes showed any sign of movement?

Air Chief Marshal Sir Patrick Hine: I can start off the answer and Bill Wratten will amplify as necessary. Within four days of the air campaign beginning, we had air supremacy. The Iraqi Air Force had hardly shown at all, in terms of taking off with air defence aircraft. Those that were airborne were quickly despatched by coalition fighter aircraft. Because the Iraqis were not showing in the air after the first three or four days, we assumed that Saddam was husbanding his air force until such time as the coalition ground operations began, which they did much later than Saddam assumed. We carried on with Smart weapons, in particular, bombing the Iraqi airfields, taking out hardened aircraft shelters one by one. That went on for about two weeks and, all of a sudden, we heard that up to 110 of his best surviving fast jet aircraft had taken off and headed into Iran. Our own interpretation of that was that they were very unlikely indeed ever to come back, but had the Iranians released them and they had come back at any stage, we would have the resources to deal with them. But, effectively, it proved to be the case that they were out of the war from then on.

Air Chief Marshal Sir William Wratten: I have nothing to add.

Captain Chris Craig: There was a different dimension at sea. Admiral Dan March, the carrier battle force commander already had a very healthy preoccupation with the Iranian access of keeping an eye on that potential threat, as he, his carriers and the rest of us moved up the Gulf. The moment those aircraft fled to Iranian bases, there was a distinct change in the access of air defence to allow for fast low-level. We were in a vulnerable position by then, picking our way up the Gulf just off Iranian forces, and a low, low attack coming off the coast with very little notice launching air to surface missiles into the carrier battle group was a huge preoccupation for the Americans and for us.

Rear Admiral Philip Wilcocks: It was not only the Iraqi Air Force that went into Iran. After the battle of Quarah Island⁷, when the Royal Navy Lynx helicopters from HMS *Cardiff* lost their London brave, had effectively taken out most of the Iraqi-captured Kuwait ships, those that were left just popped across the Arab waterway and entered Iranian territorial waters. That was the last we saw of them.

Lord Hannay of Chiswick: The Iranian Ambassador to the UN made it clear as soon as that rather odd manoeuvre occurred that extremely complex matters were arising from the arrival of the planes and that it could be assumed it would take rather longer than the duration of the hostilities to work them out. That seemed to be the understatement of the century since the planes have never gone back. Presumably, they are still in Iran, although the Iranians must have had some difficulty handling them at first because at the time the whole of the Iranian Air Force at the time was American-built and most of the Iraqis were not. They were Soviet or French. We always assumed at the UN that the main reason why they did not go to the only country that might have been helpful to Saddam, which was Jordan, was because they would have crossed a red line to get to Jordan, which would have led to their being shot down by the Israeli Air Force.

Commander Gavin Coyle: I am a student here at the Staff College. Much has been said about military planning focusing on evicting the Iraqi forces from Kuwait, but the UNSCR, as has been discussed, talked much about restoring peace and security within the region. How much planning went into that aspect of the campaign?

Lord Hannay of Chiswick: The answer comes back to WMD. The main thrust of the post-war settlement was to remove Saddam's WMD capacity, to which he attached enormous importance and which he had used not only against both the Iranians and his Kurdish compatriots, but in his diplomacy. It was one of the reasons why, very unwisely, he continued to pretend that he still had them, even when he did not, because he did not want to lose that card in his hand. The basic centre of our effort from Safwan onwards to work out what a defanged Iraq ought to be equipped with was the UNSCOM effort to get rid of his weapons of mass destruction.

A second part was to find an international route to define the Kuwait-Iraq border so that it did not again become a *casus belli*, and that was successfully achieved. It was extremely complex because a large number of countries had the greatest objection to their mutual frontier with their next-door neighbour being determined by anyone but themselves. For example, on the big resolution at the UN, the Ecuadorians on the Council abstained because they were so upset at the thought of some UN process determining the nature of their frontier between Ecuador and Peru. It was pretty tricky, but it was worked out that the UN did not define the frontier, but merely demonstrated on the basis of a lot of technical material where it always had been. That was accepted by the Iraqis, Saddam Hussein and the Revolutionary Command Council, and it is, of course, now the frontier. Those were the main points of the post-war settlement and were fleshed out under Resolution 687.

Dr Robert Johnson: We now come to a question by Dr Kelly, who has written a book about politics and the war in Libya.

Dr Saul Kelly: I will not talk about that today. I shall talk about Iraq. I have a question for the panel, especially the diplomats who had experience of ground. What strikes me strongly listening to the testimony today is the constant misreading of Iraqi intentions and capabilities before, during and after the war. Why is that? Is it a failure of intelligence? Is it a failure of critical evaluation? Is it a lack of knowledge about the Saddam Hussein regime in the 1980s or is it wilful neglect for reasons of realpolitik?

Sir Harold Walker: I do not think that I can really add to what I said in my first presentation, but everyone made a mistake in thinking and believing, particularly the Egyptians, possibly Mubarak, that Saddam would not invade Kuwait. That was a plain error of thinking. I am not sure we underestimated Saddam later. Did we? In what respect?

Dr Saul Kelly: During the war and what has come up particularly from the military members of the panel is the actual fighting capability of the Iraqi forces. I can remember in the late

1970s, and it was echoed again in the 1980s, that the Iraqis were called by some western commentators the 'Prussians of the Middle East'. They were far from being that. We have heard some pretty eloquent testimony today of their fighting capabilities. That is why I was referring to the overestimation of capabilities during the war. The ceasefire is with regard to after the war.

Air Marshal Ian MacFadyen: The Iraqis had a huge Army and big Air Force, three quarters of a million in their armed forces, a force very much revered in the Middle East, at least. They had fought a big campaign against Iran and, on the whole, had fought fairly well. When it came to the Coalition Air Campaign, such was the shattering effect of air power on the Iraqi Army that it became badly demoralised. Many captured soldiers were in a terrible state, partly through being out in the field for months on end without adequate food, water or other supplies, and partly because they were badly equipped.

The air campaign especially the B-52 bombers which attacked wave on wave on Iraqi troops, especially the Republican Guard divisions, often did not do much physical damage, but did knock the stuffing out of the Iraqi troops. That was one of the big success stories. I remember General Schwarzkopf at a briefing saying, 'We did lack HUMINT (human intelligence) of what was going on in Iraq, and of what was going on in Saddam Hussein's mind. Consequently, I was forced to go more by URINT – which is a feeling in the water'!

Air Chief Marshal Sir Patrick Hine: I am not sure that we got too much wrong in the way of intelligence during the fighting itself. The kind of war that Saddam wanted to fight was the one whereby the Americans and their allies went in, and Saddam was successful in drawing them into a battle of attrition. 'The Mother of All Wars' was his phrase. That was simply not something that we would do, hence several weeks of air operations as a prelude to the ground offensive. We did not fight the war that he expected. It was as simple as that. I do not think that he could not understand why we persevered with up to five weeks of air operations before crossing the boundary. He probably thought that we did not have the guts. Then, of course, by the time we did cross the line, the Iraqi forces were either demoralised or had been severely attrited. Our own ground force was fighting a war that was quite alien to him in capability and manoeuvre, night-fighting capability and quickly overcame what resistance was left.

Sir Alan Munro: I agree with what Air Marshal Macfadyen said about the problems over HUMINT. That was certainly a feature in the few years leading up to the crisis. Examples of it were that we lacked up-to-date accurate information on what turned out to be the appalling gas attacks in Halabja. More important was the appalling holocaust of what was called the Anfal campaign about two years before the war when Saddam Hussein moved in their tens of thousands Kurds to the south to what was to be new farming areas for them, human engineering the mixing up of his population, but in fact they ended up dead in pits. That only came to light one or two years *after* the Gulf War, some four or five years after it happened. We were then told by the Iraqi Red Crescent that up to 80,000 Kurds ended up in pits from

what we understood at the time was moving them to new farming, irrigated land in the south of Iraq. That was a major lapse in human intelligence. It was a real factor at the time.

The second factor is something that we diplomats have to look out for time and again, and we tend to miss. It happened in the Iranian revolution. It is the momentum factor. When things are going very well for you and for trade, for example, there is a certain disinclination to pick up stones and look under them.

Rear Admiral Philip Wilcocks: About seven years after the end of the war, I ended up back at the Ministry of Defence as the Director of Naval Operations. I would meet my two colleagues, the Director of Military Operations and the Director of Air Operations, probably about every four weeks with our opposite number from the Intelligence community to work out what Saddam Hussein was doing. That was with the benefit of six years' post the conflict. When I reflect, I just wonder whether at the time they were speaking, the Egyptians and the Saudis were probably right: there was sabre rattling by Saddam Hussein. At what stage did he actually make the decision to go across the border into Kuwait? I suspect that it might not have been well planned. It might have just been a knee-jerk reaction, much closer to 2 August than perhaps we think. Unfortunately, we cannot ask the chap what was on his mind.

Sir Michael Weston: I have little to add to what I said this morning. Our mistake in the time leading up to the war was to assume that Saddam Hussein was logical and that he would act in the way that we would act in a similar situation. I agree very much with the previous speaker that, to some extent, he did not really know – even when his troops crossed the border into Kuwait – where he would stop. The fact that there was no resistance at all meant that he went on from Mutla into Kuwait City and down to the Saudi border. He must have wondered very much whether to go further, the greatest fear of us and the Americans – and the Saudis.

General Sir Rupert Smith: I have a couple of little examples that perhaps will show you why the point that Paddy Hine made when he said that we would not fight Saddam on his terms achieved the effect that it did. When we attacked into the defences, we created a breach and passed my Division through the breach, after which we attacked out. That all went on, on day one and by dawn at the beginning of day two, about 100 km from the breach, I had a reconnaissance unit on a line called Smash, I think. It started to make contact with columns of Iraqi tanks coming towards them. Nothing else was in range. We had a strong sandstorm and rain blowing at the time. I could not use any aircraft. I moved a rocket regiment up into line with the leading battle groups, and it was just in range to support the reconnaissance regiment. We attacked and defeated the armoured columns coming down. They were dispersed, and it stopped.

After the interrogation of the prisoners, they were surprised to find us there. They were being sent down to counterattack into the breach. I do not know what time they were given their orders, but in terms of space they were 100 km out of step with what was going on. The command control process was completely dislocated by what we were doing and the way

we were doing it. That was our intention, but it is an example of the difference between the two organisations.

The other was the effect of the air power on the enemy crews. As you have heard, it did not hit all the tanks. The Iraqis got quite good at putting old rubber tyres by their tanks and lighting them, so lots of smoke went up – in the hopes that it was recorded as a hit and no one comes back again. They also moved out of the tanks and dug holes to live in. To make it comfortable, they took the batteries out of the tanks and lit up their bunker. At the speed we were moving, they were not able to get the batteries inside the tanks even if they had wanted to, so quite a lot of tanks had their turrets taken off at about 2 km range, which were completely crewless and without electrical power. That is the evidence of the morale breaking down.

My last point is retrospective. Given the events and the JSTARS⁸ collection, that was not available at the time, we can see how rapidly they started to withdraw when the attack started. I conclude in respect of the character of the people of those places in that perhaps we could have gone much earlier. Saddam Hussein might have needed to be pushed. It was no good threatening him, but we had to push him and then he would collapse. His face would not allow him to back down without being pushed. Perhaps that was a misreading of the person and the culture. I do not know, but I have held that view for some time.

Dr Robert Johnson: We have two questions that have been waiting. I shall try desperately to get through everyone in the 14 minutes that we remaining.

John Stubbington (RAF Historical Society): My question is for Sir Rupert. It goes back to his comments. He spoke earlier about the apparent lack of tactical intelligence as he was moving forward. He mentioned JSTARS as an example, but I thought that he suggested that that might have been available at the centre, behind him, but not have been available to him tactically forward. Is that correct?

General Sir Rupert Smith: Absolutely correct. I do not think that JSTARS, which was in an early version, was further forward than Army Headquarters, if that. It certainly was not at the Corps Headquarters. If you have read about the friction between Freddie Franks, my Corps Commander, and Schwarzkopf, part of that is because Schwarzkopf had a different picture literally to Franks. They did not share the picture they were arguing about.

Alastair Rosenchein: My question is in two parts. First, how seriously was the consideration that Israel might become involved in protecting its people from Scuds? Secondly, how successful were Special Forces in thwarting that threat? The last question is probably for Peter de la Billière.

General Sir Peter de la Billière: The Scuds were militarily pretty ineffective. There was a worry that they would have an input on civilian morale, but that did not even materialise because they could not get enough Scuds into the air. Looking back on the whole campaign, Scuds

were a side issue. As far as protection was concerned, we all had overhead cover and overhead protection in Riyadh, and I am sure they probably had the same arrangements in the field. We had, although we were not expecting to deal with it, a Scud that perhaps had chemical weapons on board. There was diversification, which was irritating in terms of interrupting what we were doing if we had to go down into the basement. A sure sign of a Scud attack was that all the military would disappear into the basement, while the media would roar up on to the roof, which had a message of its own.

The Special Forces in Israel was a major issue, locally, no doubt about it. I do not know what Paddy, Alan Munro and the others knew about it, but there is no doubt that the messages I received from Schwarzkopf was that we had to stop Scuds going into Israel. That was of major importance and justified his changing his mind 180 degrees in the deployment of the Special Forces because I had told him that they would probably be able to frustrate the ambition of the Iraqis. Alan, do you want to add anything?

Sir Alan Munro: Only from the Saudi end. Prince Saud was considerably concerned at the unleashing of the Scuds on the Israelis. He said that we had to do everything we could to deter the Israelis from retaliating, as they were initially inclined to do, because if they are back in it, frankly we could kiss goodbye to our coalition. The Americans took the effective lead on that.

Lord Hannay of Chiswick: With the Israelis, the first thing to remember is that the only country that counts is the United States. The United States deployed an enormous effort to ensure that the Israelis did not retaliate. Larry Eagleburger,⁹ the Deputy Secretary of State, practically lived in Jerusalem throughout the conflict, holding the hand of the Israelis. It was a fraught issue because no Israeli Prime Minister ever wants to be one who it can be said allowed an attack to be made on Israel and did not retaliate. It was difficult, but it was managed extremely skilfully by the Americans, and we all breathed an enormous sigh of relief because the effect on the Arab members of the coalition and on the diplomatic coalitions in New York if the Israelis had retaliated would have been disastrous.

Air Chief Marshal Sir Patrick Hine: From what has been said, the audience will gather that Scud was really a political weapon with which Saddam wanted to turn the whole conflict into a jihad. The Americans handled the Israeli side of it extremely well, as you have just heard, and deployed a lot of Patriot missiles to intercept the incoming Scuds. I wonder though what the Israeli reaction would have been if one of those Scuds had gone into a huge block of flats and killed 300 or 400 people. To have kept them out of the war in those circumstances would have been a lot harder.

Duncan Anderson (Royal Military Academy, War Studies, Sandhurst): My question goes back to Sir Rupert's statement about Saddam requiring one push to get him out of Kuwait. My reading of the last UN resolutions coming through in December and January 1991 was that, rather than trying to push Saddam out of Kuwait, it was really intended to pin him in position so that we could move our forces into positions from where they can attack. This is

from memory, so I might have it slightly wrong, but one of the resolutions advocated compensation for the al-Sabah family to which it was impossible for Saddam to agree. Am I right in thinking that some resolutions were, in fact, designed to pin Saddam rather than to push him out, or have I completely got the wrong end of the stick?

Lord Hannay of Chiswick: You have got it wrong. First, there were no resolutions passed by the Security Council in December or January 1991. I do not remember any resolution on compensation for the al-Sabah family. Resolutions talked about compensation for the costs that Saddam had inflicted on a wide range of people who did, of course, include the Kuwaitis, but also included the Saudis, the Indians, Sri Lankans, Bangladeshis and others who had taken huge costs out of the need to repatriate their people.

No, there were 12 resolutions at the time the war started. The last one was that adopted at the end of November authorising the use of force if, after a period known laughingly as the 'pause of goodwill', Saddam had not withdrawn from Kuwait. The sanctions resolutions were designed to bring about a change of policy and they failed in that respect. They were certainly not designed to prevent his changing his policy.

Audience Member: I am also on a course here. I wish to go back to the political and diplomatic reasons for stopping the war short of capturing Baghdad. Were there any serious pressures from the Arab countries, the members of the coalition and the host countries of Saudi Arabia and Kuwait as well as examples shown, for example, by Ecuador, for the coalition not to violate legal principles of sovereignty and get rid of an Arab leader. To me, the Kurdish issue played a central political part in matters. I am just wondering whether you can confirm or deny that.

Lord Hannay of Chiswick: I do not think that the timetable lends itself to a very satisfactory answer to your question. The Kurds had not risen up at the time of the ceasefire at Safwan. The Kurdish and Shia risings came in March, which was after that ceasefire. The coalition would have had to break the ceasefire if it had wanted to resume hostilities and that was not something that any of the Governments concerned were prepared to contemplate. Moreover, I do not believe that there is much of a secret about attitudes. President Bush in his memoirs as well as James Baker and others all made it very clear that they were quite determined on a number of grounds not to go beyond the limits laid down by the authorisation to use force, which was to get Saddam Hussein to retire from Kuwait. The issue of restoring peace and security in the region would not in itself have justified marching into Iraq.

There were other reasons, too. The very sensible reason ignored by Saddam was that they did not wish to become responsible for the governance of Iraq. There is not much mystery about that, frankly. Where the Kurdish dimension did complicate things a bit was that, when the Kurds – alas – rose up too late after the ceasefire and not much could be done, there was among the western allies a desire not to take any steps that would lead to the disintegration of Iraq or its separation into three different states.

Dr Robert Johnson: There is time for only one more question.

Audience Member (United Arab Emirates): I am a student. My question regards the war principles. Was the commander faced with a challenge of how to keep morale on the field, whereas western soldiers were fighting in other countries on their behalf? Secondly, had industry provided a new weapons system or new equipment for the Army to try during the war?

General Sir Peter de la Billière: As for the three British services out there, morale was not an issue because they were well led. Sound plans were put in place in which they participated. It was not something that crossed my mind as being an issue. However, there was one exception. It is something that we have not discussed at all today—the media. In terms of influence on morale, the media are central. If they report adversely, you will get the British people either ill-informed or perhaps made fearful, and that will reflect in terms of their communications with the servicemen at the front and have a dramatic impact on morale quickly. We were fortunate, thanks to the support from Paddy's headquarters and work on the ground by some 200 people, that the media side was well contained, as a result of which the reporting of the war was, generally speaking, favourable and that helped to boost morale.

Dr Robert Johnson: There are many more questions but, sadly, we are out of time.

I have learnt a great deal today, and I am sure that the panellists feel that they have also learnt from each other today. I have learnt why many vehicles in Germany were up on bricks rather than manoeuvring around the north German plain. I cannot possibly sum up the day, all the richness of information and the candour with which people have made their remarks, even on the record. Perhaps it is worth reflecting on the fact that our understanding of victory as a strategic victory is much more important than an operational victory. I will leave you with that thought – with the current campaign in Afghanistan in mind. Thank you, Lords, Generals, Admirals, ladies and gentlemen for your time today.

Notes

¹ Word missing in original transcript and subsequently inserted by RAF CAPS.

² Colin Powell, US Chairman of the Joint Chiefs of Staff, 1989–93. Secretary of State 2001–2005.

³ General Leopoldo Galtieri (1926–2003), President of Argentina, 1981–2. Within days of the British decisively ejecting the Argentines from the Falkland Islands, Galtieri was removed from office.

⁴ Ali Larijani, Iranian Foreign Minister.

⁵ Sir Rupert Smith, *The Utility of Force: The Art of War in the Modern World* (London, 2005).

⁶ Chemical weapons.

⁷ Battle of Quarah Island.

⁸ Boeing E-8 Joint Surveillance and Target Attack Radar System (JSTARS).

⁹ Larry Eagleburger (1930–2011), Deputy Secretary of State, 1989–92.

Interview of Lord King of Bridgwater

With Dr Kate Utting and Dr Michael Kandiah

11 July 2012, Palace of Westminster

Dr Kate Utting: Could you comment on the role of Prime Minister Margaret Thatcher during the early phases of the Iraqi invasion of Kuwait?

Lord King of Bridgwater: There was no question, following on from that there was a wide feeling the Gulf – it is just fresh in my mind, actually, having seen about some of the meetings with rulers and others – of the very strong feeling that her role and the leadership which she had shown was critical in the speed of the response.

Someone said that Saddam Hussein ought to have known, but I think that that is idiotic. How would he possibly have known where she was going to be on 2 and 3 August 1991, and where the President of the United States was going to be? There is no doubt that, from the point of view of Saddam Hussein, when you look at the normal speed of international co-operation on an issue like this – telegrams, advice, ambassadors and various other things in terms of the speed of response – their being together that morning in Aspen the next day was critical.

Dr Utting: Do you think then, if she had not been –

Lord King: She did not come back, actually, till the next Monday. She went to Washington, of course, and was very closely involved with Bush. Messages were flying backwards and forwards, and we were having meetings here, but she did not actually come back till the Monday. I think the first meeting of a Cabinet Committee or a meeting of Ministers was on the Tuesday. I have a feeling it was probably about the 7th or the 8th. Would you be able to check that?

Dr Utting: Yes. The initial deployment –

Lord King: She went to a cabinet meeting in Washington, and was very closely involved at that time.

Dr Utting: Do you think then, if the circumstances had not been that she was in the United States anyway, that it would not have been so much an Anglo-American co-ordinated effort from the get-go?

Lord King: There is nothing like face-to-face. Knowing both personalities, there was certainly no doubt where George Bush stood, but Margaret Thatcher's speed of reaction in that situation and her absolute instant recognition, given the history of this country – memories of appeasement – that here was another dictator marching through, meant that there was absolutely no question of what had to happen.

Funnily enough, with the messages, it was a great shock to the system. It was a big shock to the Arab system, because the feeling before when these stories were around about the movement of Republican Guard divisions – looking as though they were moving down and approaching the Kuwait border and all that – and whether something was going to happen or not, was very strongly, 'No. As Arabs, we do not invade each other's countries'. That was the very strong Arab feeling at the time, and it relied not just on Arab culture and code of behaviour, but actually on personal assurances, of course, from Saddam Hussein to King Fahd and, if I remember rightly, to Mubarak¹ as well. It had been fed in through the intelligence net.

Dr Utting: Are you saying –

Lord King: That was before I had intelligence briefs on my desk. We were coming to the end of a parliamentary term. Holiday time was coming up. The Commons – guess what? – had gone on holiday again.

Dr Utting: Yes.

Lord King: I asked questions about this, and said, "Look, what about this? Is this sinister"? I got all the assurances that everybody else had got that what he was going to do –

Dr Utting: It was just 'sabre rattling'?

Lord King: That he was going to frighten them and, at the worst, if he did anything, he was only just going to come across and go for those oilfields – that that is what the row was about and that his punishment would be to go for the oilfields and perhaps one or other of those islands as well.

Dr Utting: The disputed islands.

Lord King: "He won't go any further": that was the sort of thing.

Dr Utting: So, not Kuwait City?

Lord King: That was the sort of phase two view. Of course, that was all –

Dr Utting: Completely wrong.

Dr Michael Kandiah: What was your assessment at the time?

Lord King: Well, I asked the questions at the time: "What's going on? What is happening"? I received these replies: "Yes, we understand entirely why you have raised the question". Privately, people were a bit smug, I think, because we happened to know what he had said to King Fahd and all that, through our intelligence net through our ambassador, or whatever it was, so it was: "Relax and go on holiday".

Dr Utting: Lawrence Freedman suggested in his book that, after *Options for Change*, civil servants in Whitehall were worried that there might be some type of war – a conflict such as this – that might be used by the military to undermine the conclusions that you had come to in *Options for Change*, a bit like a John Nott moment in the Falklands War. Was that at all the case at the time, or is that just reading too much into it?

Lord King: No. Somebody might raise that with you and say, "We warned them". The point about *Options for Change* was that there was such a clear strategic change. In other words, the level of forces and the basing of those forces had been to cope with the threat from a Soviet Union and a Warsaw Pact neither of which still existed, if you remember?

Dr Utting: Yes.

Lord King: That was the overwhelming challenge. We had East Germany, the Iron Curtain, Berlin and all that stuff. That was the case for the level of forces, so you could not argue.

There was an interesting point about the public presentation of *Options for Change* when I had a press conference afterwards. We changed from something like 320,000 in uniform to a quarter of a million. I think it was a BBC report that said, not "This is a desperately dangerous and risky cut", but "What on earth do you want all these people for"? That was what the Cold War was all about.

Dr Utting: A deterrence force.

Lord King: It had all gone, so: "Why on earth do you want to keep all these people"? That is when I produced one of my rare *bon mots*. He said, "What threat are you expecting"? and I said, "The threat of the unexpected". That was not bad, because it was seven days before Saddam Hussein went in.

Dr Utting: It certainly was.

Lord King: It was a fairly obvious remark, but it was exactly what happened.

After all, after it all happened, we were still able to put 45,000 people into Kuwait – or into Saudi and adjoining territories – and all that. No, I must quibble with what Lawrie [Freedman] said about that.

Lord King: I am sure that there was all sorts of stuff, with people supporting the continuation of the Staffordshire Regiment and saying that not to was an outrageously risky move.

Dr Utting: Would you say then that some of the options that you were looking at were even greater reductions than that?

Lord King: No, we put them on hold, of course. We had done it.

Dr Utting: Yes. You had announced it.

Lord King: And then we had to put the whole thing on hold while we sorted it all out.

Dr Utting: Yes.

Lord King: What of course we discovered – for which, by the way, thank you very much; I found it fascinating to read – was that what we thought we had anyway, we did not have. To send our armoured brigade, then reinforced up to the division commanded by Rupert Smith, we had to take virtually every serviceable tank out of Germany. What it revealed – a bit like Saddam Hussein – was the amount of our kit that did not actually work that we thought we had.

Did somebody produce in the seminar the sit-rep of the scale of the Iraqi forces?

Dr Utting: No.

Lord King: He had 1 million men in uniform. I am trying to remember what the scale of the Republican Guard was. They were the ones; the rest did not really add up to a lot.

Dr Utting: They were conscripts.

Lord King: I am trying to remember the strength of the Republican Guard. It might have been 300,000 or something like that. He had blow-up tanks and things like that. Did you know that? He had inflatable rubber things to look like tanks.

Dr Utting: Deception.

Lord King: And a lot of his kit did not work either.

Dr Utting: Lord Hamilton seemed to suggest in his evidence to our witness seminar that Alan Clark² had been up to his own defence review type business.

Lord King: Oh, yes.

Dr Utting: Were you aware of that?

Lord King: Alan, of course, was a great military historian. Have you ever read any of his books?

Dr Utting: Yes.

Lord King: *The Fall of Crete*, or particularly *Barbarossa*.

Dr Utting: *The Donkeys*.³

Lord King: Alan did have ideas of what he should do. I cannot quite remember how he sort of deviated.

Dr Utting: Looking at how the build up of the forces took place in what the Americans call the DESERT SHIELD phase, it looked like it was going to be largely an air and maritime response for Britain, and the decision then to deploy the brigade and then the division came later – nearly a month later. Was that because we did not think there would be a need for ground troops, or did we think that the deterrence effect of maritime and air would do it enough, in combination with sanctions?

Lord King: If you remember – an awful lot happened over about a two-week period – the first, initial problem was actually to get any invitation to come. Dick Cheney went very quickly and saw Fahd, and then did get agreement to come, but there was all this sort of stuff: he is the custodian of the two holy mosques – what are we doing with Christian soldiers crashing around in Saudi Arabia? And the sensitivities of women serving, and all that stuff. There was quite an initial hesitation. The view was absolutely clear: we could not go unless we were invited.

Dr Utting: Right.

Lord King: The first people to get the invitation were the Americans, because Cheney went very quickly. Then, pretty quickly, we were in there as well, and the invitations came.

Then it quite quickly moved from the initial slight reluctance to quite a bit of nervousness – actually fear, in a way: “Just a minute. Kuwait was awful, but what happens if he doesn’t stop at Kuwait?”

Dr Utting: Yes.

Lord King: That went right down through Saudi; it went to Bahrain; it went to Qatar; it went to the UAE, too. I do not think Oman quite got caught up with it. Then these people started to say, "Well, actually we would like quite a bit". They were worried.

They were worried about two things. One was invasion – full-scale Republican Guard armoured divisions just marching right on down, capturing them and cornering all that.

I never realised, but there was some story about Saddam Hussein – have you picked that up? – having had some research done which claimed that he was descended from the Prophet.⁴

Dr Utting: Yes, that is right.

Lord King: And that he was therefore –

Dr Utting: A guardian.

Lord King: And entitled to take the leadership and control of all that area. Actually, strategically and in terms of power play, he would have been right. If he had cornered all that oil stuff, and without the prospect of kicking him out, people would have had to think very hard about the economics – America less so now than then. But why were they so supportive of Saudi Arabia? Because it is critical to the American economy.

Dr Utting: Yes. So was it a big surprise when the Iraqi Air Force then found sanctuary in Iran?

Lord King: Yes, that was extraordinary.

Dr Utting: Very strange.

Lord King: That was such an odd business. I am not sure that I ever quite heard the end of that. Do you remember when it was? Was it in the air campaign, or was it before the air campaign started?

Dr Utting: I think it was before.

Lord King: That was such an odd business. I am not sure that I ever quite heard the end of that. The air campaign was so devastating. You have got it in this evidence here. The scale of that air campaign was unbelievable. There was no way the Iraqi Army was going to cope with that or, I mean, that the Iraqi Air Force was going to cope with that.

Dr Utting: Yes. It was from 15 August onwards. They resumed diplomatic relations for the first time since their war.

Lord King: Who? Iran?

Dr Utting: Iran and Iraq.

Lord King: Yes, but they did not leave then, did they?

Dr Utting: No.

Lord King: I did not think that it was related.

Anyway, from then on we were getting these requests. I am now in week one, or really into week two. Then they suddenly thought, "Just a minute. We need a bit more help, and we want a bit more protection". They were worried, if not about invasion, then about special forces attacking them – assassination, terrorists, a bit of decapitation of Gulf leaders. Those were the sort of fears they had.

Dr Utting: Scenarios.

Lord King: So they were then pretty keen to get our support.

Dr Utting: At the end of August, you went out, didn't you?

Lord King: As you said, the first thing we could get there and get there fast were the aircraft. We already had the Armilla Patrol, with ships around and stuff in the Indian Ocean, which could be shipped in, and we got them in pretty quickly. Then, pretty quickly after that: "Well, what about some troops"? The first troops, of course, were really – I cannot remember if it was an RAF regiment or whatever – for airfield protection for the planes that we had out there.

Dr Utting: Yes. Our naval witnesses in the seminar seem to be a bit critical of the decision not to deploy an aircraft carrier. What was that all about then? Did you feel it was not necessary because of the capabilities that the United States had?

Lord King: Yes. I do not know how far the *Clemenceau* ever got. Have you picked up about the *Clemenceau*?

Dr Utting: No.

Lord King: The *Clemenceau* was the French aircraft carrier, which they decided to send, but they only put helicopters on it. They put on Puma helicopters. The initial instruction was that it was not to go beyond the Straits of Hormuz, which was rather outside the helicopter range, really.

Dr Utting: Yes. So what was the point?

Lord King: Yes.

Dr Kandiah: It was very far away.

Lord King: Yes. Anyway, that was that. That was how they started.

What would the carrier have done? We had all the aircraft – land-based – that we needed. We had all those all the way up from Oman, UAE, Muharraq, Dhahran and I think – I cannot remember – Tabuk and the other Saudi one. I think we had some planes there. We had all the air bases that we needed. You only need a carrier if you have not got airfields, but we had bags of airfields.

There was a slight feeling – it is rather unkind – that a lot of people thought they were missing out on the action, and that they would like to be involved. I do not think it – the *Ark Royal*, if I remember rightly – got beyond the eastern Mediterranean. Then the issue was whether it was within the campaign medal country.

Dr Utting: Always very important.

Lord King: Anyway, it was actually quite late on.

Dr Utting: Yes.

Lord King: The carrier thing was not earlier, of course.

Dr Utting: No, it was not.

Lord King: That came up sort of quite well on.

Dr Utting: Yes, in September. In the initial phases, when you were thinking about the war – that it possibly could, if economic sanctions and these kinds of compellence deployments did not work –

Lord King: There were suggestions coming from one or two rather impetuous – or one or two slightly excitable – Arab friends that we should go straight in: “Saddam won’t listen to anything except force. We should go straight in and smash him up”. I can remember a phrase: “It is wrong to underestimate your enemy, but you should not overestimate him either”, and that his armed forces had not been that good in their performance against Iran. I do not know that people entirely held that view – I am not sure – but that view was that we should go straight in.

We were never in that country. From the Prime Minister downwards, we wanted DESERT SHIELD, sanctions, common sense: total, maximum diplomatic pressure; Russia and China

onboard; whatever UN resolution was going – and Iran onboard as well, and better relations with Rafsanjani – and get out. That was our position. The idea that we went straight in, saying, “Bloody good. We’re longing to go to war” –

Dr Utting: It was used as a pretext.

Lord King: That was not true at all.

I was looking at that today. The Prime Minister was absolutely clear that this was what we wanted. We were not –

Dr Utting: This is not regime change.

Lord King: No.

Dr Utting: Not at all.

Lord King: It was just to get out.

Dr Utting: But even if you are not in the business of regime change, the anticipated amount of casualties, the possible use of chemical weapons – how high was that in your thinking?

Lord King: Absolutely. Of course, Saddam’s record over the use of chemical weapons, against his own people, was very much in people’s minds. The first request we got – actually almost before, “Can you send some planes and can you send some troops”? – was: “Can you send us chemical protection kits”?

Dr Utting: Right.

Lord King: I am talking about Arab countries now. And we did.

Dr Utting: Michael, perhaps you would like to ask about the domestic stuff, while I find that?

Dr Kandiah: One of the things that I think is lacking from the seminar we did was the domestic element. You were in London, most of the time, and of course you are a politician.

Lord King: No, I am a statesman. An old man like me is allowed to say that. No, you are quite right.

Dr Kandiah: Could you tell us something about to what extent the domestic played any part in any of the –

Lord King: One thing I think I appreciated from the start, but I certainly appreciated it pretty quickly thereafter, was that a key role was ensuring that we got maximum public support for what we were doing, because of the feeding frenzy of the press or of the media.

I have just noticed that within about 10 days, or maybe a bit more than that, I was getting furious letters from editors – Max Hastings, [Nicholas] Lloyd, a man called David Montgomery who had *Today* – asking why their people had not been in the press pool that had gone out right at the very beginning, when I think we sent out the first planes or practically before that.⁵ There was this thing about the media's desperate wish to be involved.

Of course, one of the problems there was that there was quite an education process for one or two of the countries we were going to, not least Saudi Arabia, about the idea of allowing British journalists to crash around and about what they would get up to. There was the problem of trying to get visas for them, getting them out there and trying to run a pool and all that business.

There was terrific interest and terrific desire for news, and we were having a succession of press conferences. That was a challenge, and Peter de la Billière flexed us a bit in his stuff, because he could not understand why I was always chasing him and saying, "What is going on? I need to know". We were having press conferences, perhaps with Stormin' Norman [Schwarzkopf] and with Peter de la Billière, in Riyadh at – whatever – 7 am UK time, then one in the MOD perhaps at – I do not know – 11 o'clock UK time, and then one in Washington or wherever.

Dr Utting: To get all of the constituencies in.

Lord King: London journalists were not satisfied if we said, "Well, why don't you just listen to what was said in Riyadh"? They wanted to ask their own questions and wanted to have their own information.

I did spend a lot of time trying to ensure we gave good, effective press conferences, with clear information and delivered by people who could do it. I brought in a number of people. I remember one chap in particular, who very sadly died young – John Thomson. He was a commodore; no – what am I talking about? – an air commodore, I think. He would have gone on to be Chief of the Air Staff, but he died young.⁶ He was extremely good. What I liked was to have guys in uniform – I might chair it, but I wanted guys in uniform – standing up: for example, if you were deploying aircraft, a guy who has flown them standing up and saying what these aircraft do.

One of the pleasures or good recollections I have of it – this draws some comparison with one or two of the events we have had since – is that, actually, the further it went on, the bigger the national support for what we were doing. You can look at the parliamentary votes in here. There was quite a bit of hostility. A few people in the Labour Party were not madly enthusiastic.

Dr Utting: Did they want sanctions only?

Lord King: Yes. Actually, we did get a bigger and bigger vote in Parliament. You can see it reflected in the figures.

Dr Utting: That is for sure.

Lord King: I saw that as my duty to the guys who were out there. I never had any trouble, and when I managed to go out to see them, which I did quite a bit in the early stages, I would say, "Look, I can tell you one thing straight away: the whole country is right behind you". That was very important, and that was an important part of my job.

Kandiah: Was Labour's position a tactical one—that, in fact, they supported you in Parliament, but they said that sanctions –

Lord King: No. There were quite a lot of pacifists in the Labour ranks – people who were just anti-war – and they had been in the "Ban the Bomb" movement through to anti-war marching and all that. I am not saying the leadership, but there were a lot of such people on the backbenches in the Labour Party. I cannot remember where Tony Benn was at that time, but there were a lot of people asking questions and saying that there must be a peaceful solution, as done by the United Nations –

Dr Utting: Going back then to November and the change of leadership of your party, as well as John Major becoming Prime Minister, did that have any significant impact on our preparations? How was that – a change of leader – viewed from a defence point of view?

Lord King: Well, it needed a bit of fast footwork from me, because I had just been out there. We were obviously building up to the risk that we were going to have to go to war, and there were worries. Some of the initial projections of possible percentage casualties were –

Dr Utting: Huge?

Lord King: They were obviously quite difficult. The problem was: how long were they going to be stuck out there for? Not much seemed to be happening on the diplomatic front. They were stuck out in the desert in pretty unattractive living conditions and with problems. I used to go out – I cannot remember how many times I went – to keep in touch and give them encouragement, and make them aware of all the support there was for them. I said, "The whole country is behind you. We are determined to see it work, and you will receive all the support and help that you need". We were shipping everything out. They knew that they were getting all the best kit. We took all the best tanks out of Germany, and any amount of spare engines and so on.

There is a thing that I think comes up there. I am not sure how it was quoted – I think Charles Powell quoted it actually – but it was not quite right. I had in the defence industry people, and I said, “This is the biggest showcase. You’ve been selling your kit or trying to sell your kit to these various countries. This is the time – this is it in action – and it had better work! It is critical to our national interest; it is also pretty important to you commercially that it goes well, because you’re going to get a lot of publicity if it doesn’t”.

One of the other things was that they sent out a huge number of their chaps. I am not talking about BAE/al-Yamamah people; Vickers had people out there, because of Vickers Challenger tanks and all of that, reinforcing –

Dr Utting: Doing the maintenance, advising –

Lord King: And we had any amount of people who were ‘civilians’ – engineers or whatever they were – right in support of their own kit, perhaps even riding on it to make sure it worked. They saw the scale of that support. I said to them, “Don’t be in any doubts about it. You know our Prime Minister and you know about the Falklands and all that – the *Canberra*, and then the *QEII* – and I can tell you that she is right behind you, and we are right behind you”, and all that.

Then I come back, two weeks later –

Dr Utting: And blow me – a coup!

Lord King: And I say, “I just want you to know that the Prime Minister” –

Dr Utting: The new one.

Lord King: “The new Prime Minister is right behind you”, and he was. He was fine, and he was very good. John was very responsible, and obviously he respected the fact that Douglas Hurd and I had been –

Dr Utting: The continuity ...

Lord King: We had been fighting, with all that, and on we went. He was new to it. He did not have any military background. He did not have any background at all in any of that.

Dr Utting: No. He had been Foreign Secretary for only three months.

Lord King: Three months as Foreign Secretary. Anyway, there was all that.

It was not ideal. It would have been much better, and I tried to see if we could not find some way in which, if the party believed that change was really needed – that the Prime Minister,

Margaret Thatcher, had had a wonderful innings, but that it was time for a change – I could get a few people to suggest, “Well, perhaps not just now: in the middle of a war, or just building up to a war”?

Dr Utting: Terrible timing.

Lord King: I may say that I have just talked about our troops, but of course I went round all the rulers to tell them as well. Fortunately, I know about dealing with Arab people. They are always very polite, but we have different cultures. What I found was that the first time I used to meet them, they were very polite and very correct. The second time, they were just that bit warmer – recognised the face, and all that. Then, about the fourth or fifth time, you had a really good relationship.

That was actually important, because John’s problem, in the middle of all this, was: “Who is this new chap? Is he going to ...?”, because they knew Margaret and they knew her reputation. They all attributed to her the credit for getting this defence thing going as quickly as it was. With all respect to George Bush, they felt that she was the one who had really got it going, although there is no question, I am sure, but that he would have got there perfectly well as well. She did enjoy the credit for the thing happening as it did, so that made it all the more difficult when she suddenly went, because they do not actually have to understand or are not entirely familiar with that system of government.

Dr Utting: Yes. They believed that she really was in charge.

Lord King: No, I meant that something is not going to happen to them; it is even more of a shock when they find that a ruler has suddenly disappeared, without a revolution. Anyway, I went out again and crashed all round –

Dr Utting: To reassure.

Lord King: And I just said, “It is as it is”. Peter de la Billière and I went around. He was extremely good, and had built up very good relationships.

Dr Utting: With the military leaders and commanders?

Lord King: And with the rulers, absolutely. He was good, because he spoke a bit of Arabic, and he had done his time.

Dr Utting: Certainly, with his background.

Lord King: He was known as a brave soldier, and that did him no harm.

Dr Utting: When you were sitting in the committee in Downing Street and the IRA mortared Downing Street, was that something that did not really bother everybody – it was just business as usual – or was that really a distraction from all of this?

Lord King: The actual fact about the mortar was that we were very lucky, of course. Two of them did not go off, if I remember rightly.

Dr Utting: Just the one.

Lord King: Just the detonator. One went off. If I remember rightly, the one that went off was outside the garden walls, and I think two fell in the garden, did they? We just got the pop of the detonator and the explosion –

Dr Utting: It was just the windows that went.

Dr Kandiah: It could have been a lot worse.

Lord King: Yes, yes.

Dr Utting: Yes, and then where would we have been?

Lord King: I think people were pretty shocked by that.

Dr Utting: Did you expect any follow-up attacks?

Lord King: I think, maybe, they were a bit more shocked than me. I had had four years of Northern Ireland: there were one or two bangs in my time.

Dr Utting: Yes.

Lord King: All it did was shatter the windows, but they all had the plastic inside them, so they were all crazed; and we adjourned to COBRA⁷, if I remember rightly. I think John Major said that – after the first one, people had got down and were starting to get up – I said, “Keep down”. I do not know if that is true, but he said that. It would have been quite good advice to give, because then there were two more pops.

Dr Utting: Turning to the ground war – we are coming to the end; I know you have things to do – it was a catastrophic success, wasn't it?

Lord King: The ground campaign?

Dr Utting: Yes.

Lord King: Yes.

Dr Utting: Had that been anticipated?

Lord King: No, not at all.

Dr Utting: How long did you think it was going to last?

Lord King: No, because of the overwhelming success of the air campaign and the degree of it; at the start, nobody envisaged an air campaign of that length. It was the first real use, as you know, of much more sophisticated targeting and accuracy of weapons.

I cannot say it was unprecedented, because no two wars are ever the same, but it was a much longer air campaign than I think we had originally envisaged at the start. It was overwhelmingly impressive: half the Iraqis were waiting to surrender the moment before anyone got killed – it was shattering – and not surprisingly, because there was no air cover. It was total air supremacy. The most significant casualties, as you know, were when we tried to go in very low and do the airfield suppression with the JP233s, when we lost a few planes and people.

Then there was the speed of the land campaign. We could not be at all sure – the centre of the minefields, flaming ditches, the setting of the whole place on fire and all of that – what was going to happen, how successful the left hook would be and all of that.

Of course, one of the consequences was that we actually had not presumed sufficiently in advance that we were going to win as quickly as that, and thought about what the terms for that first ceasefire should be. There was, as we know too well, far too much back-of-the-envelope stuff by Norman Schwarzkopf on his way up to that, and then, of course, about permission to continue to fly helicopters and all that.

Dr Utting: Yes, against their own people.

Lord King: When you look at the time that was spent on the rules of engagement, for instance, for the Armilla Patrol or for the naval blockade in support of the sanctions, there was a very careful working out of what all the terms should be and how we handled the thing.

Then we came to the end of the war. Of course, it also stopped quickly. I remember the meeting we had in No 10 – Douglas [Hurd]⁸, I think, was in Washington at that time, but we had a meeting in No 10 – on day four, or whatever it was. We said, “Well, it has gone fantastically well”, and there were the stories of Mutla Ridge and Iraqi troops all streaming away, and trying to get out and going.

We came out, and it was agreed that we needed to talk very quickly to our American colleagues on: "What do we do now, and when are we going to stop the actual land campaign"? It was fixed and we came out: John was going to speak to George Bush, I was going to speak to Dick Cheney, and David Craig⁹ was going to speak to Colin Powell. We rang through and got exactly the same answer: "I'm afraid they're all in the White House". That was when it was said: "A 100 hours war, Mr President". "It's a turkey shoot," said Colin Powell, "so let's stop".

That was the only time. The co-operation and communication was terrific all the way from the first meeting in Aspen and right through, as was the fitting in of the troops, the arrangements about how they would work and our relationship. I remember many happy hours with Norman Schwarzkopf and, of course, with Peter de la Billière, Paddy Hine and the people who were involved. The only time it just never happened was –

Dr Utting: At the end.

Lord King: They said, "Let's stop".

Dr Utting: Really?

Lord King: We were told, "We've decided to stop", and that was it.

There were all the arguments thereafter. My own view is – 24 hours too soon. We could have caught those two Republican Guard divisions, the hook was coming round the noose, and what would that have meant subsequently when the Shia –

Dr Utting: For an uprising ...

Lord King: And George said, "It's now over to the Iraqi people", which they then thought was the signal –

Dr Utting: For an uprising.

Lord King: And that they would probably get American support and all that. On that went, and that is history and public knowledge.

One was that it stopped too soon. Then it was: "There's got to be a ceasefire, and what are the terms going to be"? That was the bit where there had also been inadequate – really hardly any – preparation, because it all happened so quickly.

Dr Kandiah: It was really the collapse of the last bit of war that was the problem, in a sense?

Lord King: Yes. If you look at other wars, there comes a later phase in the war when you are starting to think what the terms will be for the peace.

Dr Utting: Post-hostilities planning.

Lord King: But if the war lasts only four days, you are still wondering whether you are going to win.

Dr Utting: The rug is pulled out.

Lord King: You may be tempting fate, in some ways, to say, "Well, we know we're going to win, and we're going to win jolly quickly, so let's agree the victory terms now". You concentrate on making sure you win.

Dr Utting: Some of the critics of the way it ended suggest that what should have happened was that Saddam Hussein should have been meeting people such as General Schwarzkopf –

Lord King: And had some humiliation. That is all part of it, exactly right.

Dr Utting: And that that would have made a difference, because we did not destroy his war-making capability, did we? In that sense, our war aims were not met.

Lord King: Norman Schwarzkopf was a great war-fighting general, but he was suddenly thrust into this position of responsibility. He had Prince Khalid with him, and I do remember those television interviews.

Dr Utting: Indeed. We were absolutely glued to the TV.

Lord King: I mean the television interviews outside the tent, when Prince Khalid was there, with Norman Schwarzkopf giving him a few helpful suggestions about what might be interesting things to say.

It happened so quickly. As I say, you cannot write a manual on this saying, "Always ensure that you've got the victory terms agreed before you actually start the campaign". Maybe you do? Maybe that should go into the little school handbook.

Dr Utting: Do you think that part of the problem that was then created with the Kurdish uprising and then the Shia uprising was: "Oops, what do we do now"? John Major's great success was getting the safe havens policy and then the no-fly zone. Could this have been planned for or predicted? What operational plans were there for that?

Lord King: No, no. The thing is that a lot of people were wise after the event about why we did not agree to go to Baghdad and why we did not march on and depose Saddam, but all

our authority – all our commitment to our people who were fighting and everything else – was that we were going there to end an act of aggression and to restore the legitimate sovereignty of Kuwait.

Dr Utting: Absolutely.

Lord King: We were not there for regime change in Iraq. We were there to put Iraq back in its box, and get it out of the country it should not have been in. This business about – well, you know: if we had gone on to Baghdad, it would have been a very different matter, as we know and as it proved to be. There would have been a lot more casualties. And what would we have said to the people who said, “I didn’t think that that’s what we were doing”.

Up until that rush of blood, which was his invasion of Kuwait, Saddam Hussein had been seen as a protector of those Arab countries, and appreciated by us and by America as a bulwark against Iran.

Dr Utting: As a counterweight to Iran.

Lord King: As you know, part of the Saddam complaint – why he invaded Kuwait – was that he thought their activities in the downstream were undermining, and causing this fall in, the oil price.

Dr Utting: Directly affecting his economy.

Lord King: Iraq was bust, after all the money they had spent, and a lot of that money had been spent defending these rich Arab countries who owed him something. He thought that the money they claimed he owed them, they should write off. Iraqi lives and blood had been spent defending these countries, and they should jolly well pay up. You can see from the grid.

It is quite interesting that, as you know, at the beginning of all this, there was some lack of sympathy, among some of the other Arab countries, towards Kuwait. They thought that Kuwait had a few questions to answer. Is that right?

Dr Utting: Yes. You could read it as being acts of provocation.

Lord King: Yes.

Dr Utting: That is great. Can I ask one final question? This experience and great success meant that we were – perhaps, we could say – punching above our weight again in world affairs, militarily and diplomatically. Did it mean that you went back and looked at *Options for Change* again? Were there lessons learned that re-evaluated your assumptions?

Lord King: The lessons we learned, I think, out of the thing were this, for example. When we did the *Options for Change* exercise, very rightly one of the things that really attracted all the attention at the time was the infantry regiments.

I said this the other day. You can change squadrons in the Air Force or you can do things to the Royal Logistic Corps, and people do not really focus on it; start doing things with regiments and that is in all the headlines.

Interestingly enough, I went to listen to Philip Hammond make his statement on restructuring the Army. Afterwards, I walked round the back of the Speaker's Chair and I bumped into Philip. I just happened to have this in my hand, and I said, "Have a look at this". What was it? *Hansard* for 1991: Secretary of State for Defence (Tom King): Statement – Restructuring the Army.

Dr Utting: Yes. *Plus ça change*.

Lord King: It was even the same title – not even a change in the title. There we are; it is quite funny.

On what came out of Options, I think we had 53 battalions, or regiments, if I take the infantry, but when you added up their strength – a lot of them were significantly under-strength – we had actually only about 38.

Dr Utting: That were usable?

Lord King: No, in numbers.

Dr Utting: Really?

Lord King: In terms of strength.

Dr Utting: Okay.

Lord King: In this argument at the moment, he has got the same thing. On the arguments about whether or not you keep the Scottish regiments, a lot of his argument was: are they recruited or up to strength?

The other thing, for instance, that came out of it – I do not think this was properly appreciated – was that when we said how many armoured regiments we had, how many Challenger tanks and all that, how many of them were actually serviceable and what condition were they in?

It is certainly true – if you get hold of Peter Inge, he would tell you – the appalling outrage when I went over there to see the arrangements that were being made and all the efforts that

were being made to equip our 7th Armoured Brigade, I think it was. If the Russians had decided to invade Germany at that time, we would hardly have had a tank in the place.

Dr Utting: Oh dear. That would have been it ...

Lord King: We were meant to have them, but they were sitting there on blocks, or something, with no engine. You may have heard that.

Dr Utting: Yes. I think that that is one of the points Archie Hamilton made, wasn't it?

Lord King: Certainly, and he would know.

Dr Utting: Yes, he was quite vociferous on that.

Lord King: Yes. A lot of what we learned from the Gulf War was about: "What actually have we got"? And when we say that we are changing this or making these important changes – that we are going to change these regiments – and ask how much this is going to alter our capabilities, although it looked good on paper, how much of that was as valid as it looked written down on the sheet?

Does that make sense to you?

Dr Utting: Brilliant. Yes. Thank you very much.

Dr Kandiah: Thank you very much.

Dr Utting: Excellent. Thank you very much for your time.

Lord King: I charge by the hour, you know that?

[Laughter]

Notes

¹ President Hosni Mubarak, President of Egypt 1981-2011.

² Alan Clark (1928-1999), Conservative politician and author. Member of Parliament Plymouth Sutton 1974-1992; Kensington and Chelsea 1997-1999. Minister of State for Trade January 1986- July 1989; Minister for Defence Procurement, July 1989-April 1992. Famed for his notoriously forthright and indiscreet diaries.

³ Alan Clark, *The Donkeys* (London: Hutchinson, 1961); *The Fall of Crete* (London: Anthony Blond, 1962); *Barbarossa*, (London: Weidenfield and Nicholson, 1995).

⁴ See Joseph Sassoon, *Saddam Hussein's Ba'th Party: Inside an Authoritarian Regime* (Cambridge: University of Cambridge Press, 2012), p.264.

⁵ Max Hastings, editor of the *Daily Telegraph*; Nicholas Lloyd, editor of the *Daily Express*; David Montgomery, editor of *Today*.

⁶ Air Chief Marshal Sir John Thomson, 7 June 1941 – 10 July 1994. Assistant Chief of the Air Staff 1989-91; AOC-in-C RAF Support Command 1991-92; AOC-in-C RAF Strike Command 1992-94; Commander-in-Chief Allied Forces North-Western Europe, July 1994. Sir John died a few days after assuming the NATO appointment.

⁷ The Cabinet Office Briefing Room

⁸ The Foreign Secretary.

⁹ Air Chief Marshal Sir David Craig (now MRAF Lord Craig of Radley), Chief of the Defence Staff.

Interview of Lord Wakeham of Maldon

With Dr Kate Utting and Dr Michael Kandiah

Dr Utting: Lord Wakeham can you tell us about your early memories of the lead up to the Gulf War?

Lord Wakeham: I went to a conference of British supplies for the energy industry to try and get some business after the end of the Iraq/Iran war, to my big surprise ... well, to everybody's big surprise, an *Observer* journalist was arrested: he was an Iranian¹. One had to say to the *Observer*, "I just wonder whether it was the brightest thing you could ever think of to send one, an Iranian, as a correspondent to Baghdad at the time". Anyway, he was arrested. And my role was to make sure that he got proper legal representation. That was what ... the only thing we could say or do at that stage which meant that I did see quite a few of the big shots like Tariq Aziz, the Foreign Secretary, and various other people when I was there.

Saddam Hussein was in Egypt at the time so I didn't see him but I saw his number two. But anyway, that was that. So that's the first time I went there. If you were to ask me about the build-up to war I was put on the War Cabinet. I was asked by Mrs Thatcher to be in the War Cabinet because I was the Secretary of State for Energy. But at no time was there a serious energy problem as far as I could see. We had plenty of supplies. Kuwait had, I think, six massive great tankers that carried the crude around. Every one of them was filled up within hours of the invasion. So the energy side of it was never really a big problem and therefore getting much involved in that because as a politician, I also realised that Mrs Thatcher was very likely to want a War Cabinet who she thought instinctively would be supportive of her because she had this in the Falklands War, Francis Pym in the War Cabinet, Francis Pym and John Nott who were perhaps quite as reliable, you know, from her point of view. And I have a feeling that ... this was never said, I have a feeling that was a factor in it. But when I did get on she asked me if I would look after the media handling side of things and I took to mean that my job was to keep public opinion as best as I could behind the objectives of war.

Dr Utting: What were your priorities and concerns?

Lord Wakeham: Well, my first priority was to make sure that the Ministry of Defence understood that they had a very crucial role in public opinion. It wasn't just a question of them making announcements when it suited them. They had to be very conscious of what was happening. Now the first thing was I said to them, "Right, there's a Media Centre going to be set up Riyadh.

You have to have a bunch of British people to make the announcements out there because it would be absolutely unacceptable for an announcement of British casualties to be produced by someone with an American accent”.

The second thing I had to say was, “If you get along with these people out there, some will be good and some won’t be good. But the last thing you want to have to do is to sack anybody”. So you want to have had more people out there than you really need so you could pick and choose which ones are good to use on really important days and use the others on quiet days. And it was very, very hard to get the Ministry of Defence to really take that on board in the way that I did. For example, if you go back to the coverage, there was no doubt that the very admirable Chief of the Defence Staff, Lord Craig, has got lots of very fine qualities but he wasn’t a natural on television, you know. That’s just life. You’ve got to try and work around those things. I mean no criticism here; but they didn’t really quite understand that. And then, if you go back to the time, they had a Group Captain², who was absolutely splendid.

Dr Utting: He was in the theatre, was he?

Lord Wakeham: Yes, he was out there. He was absolutely terrific. Anyway, then Tom King came to me and he said, “Oh, we’re standing him down”. I said, “Why? He’s absolutely marvellous”. “Oh, well, it’s a land war and we need a new land spokesman to bring in here”, Stevens³, I think his name was. He’s going to take over his scene. Well, I said, “I’m sure he’s going to be absolutely excellent, but you’re crazy. Here’s the man who the British public accept as being frank, honest, decent, clear, and you want to stand him down”. “Oh, well”, he said, “the Ministry of Defence don’t see it that way”. Anyway, life would work its works, its wonders. Tom King was in Washington. He went to see President Bush Sr. He was kept waiting and when the President came out and he said, “I’m very sorry to keep you waiting, but I’ve been watching that excellent man you have in the Middle East giving a report on war. I said he’s absolutely first class. And I wonder whether you can arrange perhaps for him and his wife to come out to Washington when this is over, because I’d love to have them to tea at the White House”. And that’s how this chap kept his job. It’s crazy, absolutely crazy. But that’s part of why I’ve fussed about this, a symbolic problem that the Ministry of Defence had in saying, you know, they have a role in presenting results.

The next thing that happened, this is from the general media handling, I got a signal from somebody that the top commentators on people out there could choose which theatre they wanted to cover. So, there’s a friend called Michael Nicholson who was ITN, he got some wonderful reports of ships and torpedoes and beautiful sunshine, beautiful views, lovely television, everything turned incredibly well.

Kate Adie had decided that the land war was going to be the difficulty albeit it would be the interesting area. So she decided to go to the land war. She hadn’t realised, and there’s no reason why she should, that that was going to be long delayed. So, she was stuck there in the land,

watching her rival on the ITN getting wonderful pictures while she was getting nothing. My anticipation was that she would start sending reports that morale was getting low, the troops were getting fed up, because she was getting fed up, you know. And I said, "Well, we can't have that". So, I said to Tom King, "What I think we must do, we'd find a way of keeping her happy". And I said, "What I suggest that we do is that each of the Senior Generals gives her an interview, just one a week, just to keep her in the picture". Tom came back to me and said, "Oh, the Ministry of Defence don't think it's appropriate because these people have got nothing to say". I said, "But that's even better. That's even better". What I want is for them to give an interview, and if they've got nothing to say, that's even better. I just want to keep this woman happy. I didn't want her flying off at a tangent.

I hope they've learned their lessons, but part of the reason I wanted to talk to you is that that is the real lesson. Wars today are much about keeping public opinion. For instance, the timescale of when the battles were going on was this really. First of all, it would have been perfectly technically possible for television cameras to show live on television missiles being fired from outside. It would be perfectly possible for those same missiles to be landing in Baghdad and killing women and children live on television. That presents an awful dilemma for those who are trying to maintain favourable public opinion. Retired generals hired by television companies would comment on the effectiveness of what it's likely to be, Scud missiles, questions like do they have gas, and so on and so forth. So you got all these great experts all over the world pontificating and the Ministry of Defence perfectly reasonably couldn't say anything until they were absolutely sure they were right. So they were restricted in what they could say and this was perfectly understandable, whereas all these great retired generals who, in many cases, were better known than the spokesman for the Ministry of Defence, they weren't able to say anything.

So, once the fighting started the spokesman of the Ministry of Defence started reporting on the bombing.

Dr Utting: Yes, precision-guided munitions.

Lord Wakeham: Precision-guided, absolutely precision-guided. So the reporter said, "Very interesting. It's been going on for a week now. Can we see some photographs of this precision bombing? Because we are most interested in seeing it and, you know, the public wanted it. And if you know it is precision bombing, you have surely got some photographs". So then, the message came back that cloud cover meant that we couldn't get photographs. So I said, "Well, that will last a few days. But you have got to find a solution". Eventually, we got the solution; we got the pictures. But they were American pictures and the Americans wanted to use them for their morning television which was five or six hours after British morning television which meant we couldn't use them. So I rang Brent Scowcroft⁴ and he said the only person that could allow these to be used was the President and he was in bed. And the question is did I want to wake him up? I said, "No" as I didn't think that was a very good idea. So, we sort of lost that one.

There's a whole range of activities which generals had never really thought about before. They've thought about public relations of telling people what they want to tell them, but what they don't seem to realise is that there are a lot of people finding out this information and putting their own spin on it and they've got to be able to counter that. The next thing that I thought was important was that we needed to think about the problems that would arise if we had a lot of casualties.

Dr Utting: They were anticipating that the casualties would be enormous.

Lord Wakeham: Yes, absolutely. We just didn't know what there would be. We had to plan for that. So the first question was where were the bodies likely to come in, and bluntly, what was the politics or what was the attitude of the local coroner to the war? Because if the coroner opposed the war, difficult questions might have arisen. So I had to get that sort of sorted out to deal with, which I don't think anybody in the Cabinet has ever had to think about before. The second thing related to casualties was that I wanted papers to be drawn up between the Ministry of Defence and Department of Environment about the housing arrangements for the widows and children of any service personnel. And virtually every department had a different view of what the rules were compared with the Ministry of Defence. And I said, "You've got to straighten these out. We cannot have a row". The same applied to housing pensions, education, all sorts of different things. And I got them working together behind the scenes so that if we did have these problems, at least we'd thought about them before.

Dr Utting: So would you say then that your prime focus in terms of media management was the domestic audience at home? Or were you also conscious of strategic communications with our Arab allies in maintaining coalition unity?

Lord Wakeham: No. I think that if I could get the presentation of the war right for the British press, then the Foreign Office would know the people would have a basis of which to deal with overseas. One of the things I did do, which again I don't think anybody ever thought of doing before, was I would ring up nearly all the editors of the main newspapers that I knew, and I knew most of them, for example, the head of the ITN; Max Hastings; different people

Dr Utting: And you did this directly yourself?

Lord Wakeham: I did. I knew them you see. And I don't say I did it absolutely every day or all day, but I did it two or three times a week. I would say, "I'm off to the War Cabinet. How do you think things are going? How does it look from where you are"? And of course, this had two effects. One is that sometimes we learned something. But secondly, flattery gets you everywhere. They were so pleased that they were on the inside track that they weren't going to say nasty things about the government or the war. It was the very subtle way of making sure that they were on your side. And I got useful information. For example, from the ITN man, Stewart Purvis. He said, "We think the big focus this coming week is going to be refugees

coming out of Iraq into Jordan, and we're sending a television team out there because we think that's where it's going to be". And I said, "Very interesting". So I rang Douglas Hurd up and I said, "On my view, what we need to do is to send Lynda Chalker out to Jordan".

Dr Utting: She was the International Development Secretary...

Lord Wakeham: Yes: in the Foreign Office.

I was in the Cabinet position in those days. And she was told to go out to Jordan. And there were pictures of her visiting the front. Half of the people thought she was the Queen! It was tremendously good PR that we were doing it. And it was only because I was tipped off by a journalist. The only problem we had was that Douglas [Hurd]⁵ was making a speech in the House that morning and we couldn't find Lynda. So he had to announce that she was going before she knew. But you see the way I was trying to work?

Dr Utting: Yes to anticipate what the story might be.

Lord Wakeham: What it might be and from all sources. You know, someone like Max Hastings, I mean, he thought he could run the war better than the rest anyway. So to be consulted was very good.

Dr Utting: As you've mentioned with Hurd in the House of Commons, could you tell us something a bit about managing the relationship with the Opposition and managing the politics at home?

Lord Wakeham: Yes. I went to see the Labour spokesman. His name was McNamara⁶, I think. He's in the Lords. And he's a very nice man and he said, "Look, the Opposition can be 100% behind you all the while there are no casualties. But it will be a different matter if there were casualties, you know". If I remember rightly, Kinnock⁷ refused to have private briefings at the time. That's a big issue that comes up on these occasions, as to whether the Leader of the Opposition wants confidential briefing. I know that Michael Foot didn't have any during the Falklands War because he felt that he wanted to be free to say what he liked and not inhibited by anything he'd be given on confidential terms. And I think that Neil Kinnock was the same.

Dr Utting: So when Mrs Thatcher resigned, quite apart from the impact that had on the Conservative party and John Major becoming the Prime Minister, how did that affect how you conducted the war? Did it make a big difference?

Lord Wakeham: No, I don't think so. John Major took over as the Chairman of the War Cabinet, and I didn't really notice any serious differences. He had a slightly different temperament. The road all went much the same. He was very good. I was there, of course, at the War Cabinet

meeting. The argument that Mrs Thatcher was dogmatic and wouldn't change her mind was simply untrue. She would change her mind. She would sum up as to what was the right solution having heard everything, and John Major would sum up the right solution. I couldn't really say there was much difference, if anything, John Major was maybe slightly better than she was, but there was really nothing much in it. They were both extremely good. But she would end up with a phrase, and it came out in different ways, but she would say, "Alright, Secretary of State, we'll do it your way, this, this, and the other thing, but you better be right". In other words, she reserved a rather more radical solution to herself, she said, "Right, we're going to do it your way but instinctively, my way is different". Now, John Major, you see, used to sum up and he put himself in the middle position of the Cabinet. Mrs Thatcher instinctively covered by taking it to everybody, saying, "Well, you know, you better be right", which is "I'm not 100% convinced but I'm going to make it so ..." which was, you know, one of her great skills. But, I mean, it was an instinctive skill rather than a thought-out skill.

Dr Utting: I know it's very difficult to look at something from a counterfactual point of view, but one of Major's great achievements at the end of the war was to institute the safe havens.

Lord Wakeham: Yes.

Dr Utting: And to try and protect the Kurds in the north and the south. Do you think that Mrs Thatcher would've had the same view of this because it really was quite remarkable how he managed to get the United States onside.

Lord Wakeham: Yes, I certainly would not say that she wouldn't have done it, because I would suspect in both cases, they would've had some good advisors. So this is an option that had some advantages and both of them were capable of taking a carefully presented view and saying, "Right, that's what we'd go for". And it wasn't something that she had a blind spot about. She did have a blind spot but not that sort of a blind spot.

Dr Kandiah: Just to go back to John Major, one of the things which was clear John Major appeared on TV. Did you advise him in any way about that?

Lord Wakeham: No, no.

Dr Kandiah: Or was it completely him?

Lord Wakeham: Completely him.

Dr Utting: Because he made the famous comment. He said "God bless" almost instinctively when the ground war came to an end, didn't he?

Lord Wakeham: Yes, yes, yes. It was

Dr Utting: Very natural touch.

Lord Wakeham: Yes, that's right. It was ... if my recollection of that was that it was the military that were pressing us to end the Gulf War rather than the politicians. They were the ones who didn't want to go on fighting. "We don't want to fight the Republican Guard with their backs to us", and all those sorts of thing. And whether they were right or not ... but we weren't planning to occupy Baghdad.

Dr Utting: It was the pictures of the Highway of Death, I think, that was very disturbing for the military.

Lord Wakeham: Yes that's right.

Dr Utting: In our Witness Seminar there was talk about the possible responses had Saddam Hussein chosen to use weapons of mass destruction. And certainly, during the conflict itself, he said that if Baghdad was bombed that he would consider using nuclear weapons. Was that part of your considerations?

Lord Wakeham: I can't recall it, it may have come up in the discussions. My role was distinctly a role about keeping public opinion behind what was actually happening rather than speculating what might happen.

Dr Utting: Yes. A lot of interesting measures on worst-case scenarios. Was having to deal with say chemical weapon casualties part of your area?

Lord Wakeham: I don't remember doing much on it. I really don't. I've got no records of that at all.

Dr Kandiah: Could you just say a bit more about sort of managing the House of Commons?

Lord Wakeham: Yes. Well, in the big issues, there were considerable advantages if you could brief the front bench. And you can see from an Opposition point of view, it was quite a big decision for them to take, as to whether they would feel inhibited. By knowing much more about it, they couldn't speculate. And I fully understand that. But from the Government's point of view, it was better to have an Opposition that understood the issues and knowing where they can press and where they can't press and so on and so forth. As far as backbench opinion was concerned, that was very much the role of the Ministers concerned, you know. Secondly, the other thing was that it was sometimes quite useful to put well-informed people on television, well-informed but who didn't know anything that was at all confidential. Now, I could give you an example. Someone like Michael Mates⁸ was extremely good because he had been in the Army and he knew a bit about it. He was quite articulate. But he was never a minister in these areas. So, you didn't have to worry that he knew some intelligence matter or

security matter. So he was a great man to put on because he sounded knowledgeable. He knew how to sound knowledgeable. He knew how to speculate intelligently about what may or may not happen. And people thought he knew a lot more than he did. But he did it brilliantly. So, that is part of the process.

Dr Utting: Perhaps just looking more generally at the whole government, the administration, and media management, I seem to remember last time we talked a bit about the role of Bernard Ingham.⁹ So did you work very closely with him? Because I can remember that after the Falklands War, he felt that the Ministry of Defence had not given him enough information during the Falklands War so he could do his job. Was it different this time then?

Lord Wakeham: Well, let's remember. Bernard was there when Margaret was there. And then, Christopher Meyer was there when John Major became Prime Minister. Bernard was superb. I got on extremely well with Bernard, but I was mostly the Chief Whip during that time. And the role of the Chief Whip has changed enormously. When I was a Chief Whip, you are half a minister in the government and you were also half ... at least part of you ... on the Staff of Number 10. The first thing I used to do in the morning when I got in, and I was in early. I would go and talk to Bernard "How's it going? What does it look like"? I would go and see the private secretaries who are all working fantastic hours.

Christopher Meyer was very good, but I got the impression that Christopher Meyer knew his own career. His own career was to be in a job where he was in a government. Bernard had know-how and Bernard had decided that he was going to devote the rest of his working life to Mrs Thatcher. And when she went, he went. And you could see the slight difference. Christopher might have been more valuable because he was a bit more impartial. But you didn't get that passionate concern that was there. And of course, Christopher Meyer was my successor at the Press Complaints Commission.

Dr Utting: When you were called before the Leveson Inquiry.¹⁰

Lord Wakeham: I did give evidence to him, yes. I think that my view is that if the speculation is right that he is going to say, "I would fight for a free press but it needs to have a statutory underpinning". I think the right thing for us to do is to give this revised self-regulatory system a chance.

Dr Utting: So what you've told us today about managing the media, the relationship with Bernard Ingham and Christopher Meyer, but your government didn't have a reputation with the spin doctoring in the same way it became an issue for the Labour government so why do you think that is the case?

Lord Wakeham: Well, I think ... Alastair Campbell was different from Bernard. Bernard was so self-evidently honest and honourable. People would disagree with him but at least they knew

where they stood with him. I mean, you know, there was no subterfuge about Bernard. He'd say what was what. And sometimes, he got himself into a little bit of hot water. But I think I contrast with it now.

Dr Kandiah: Just going back to managing domestic public opinion, do you think if the war had gone on for long and if there had been more casualties, would that have been a problem?

Lord Wakeham: Well, I think that we were preparing for the worst, and I can't guarantee how it would have happened if the worst had come, but we were going to be in a better position than we would have been in handling the adverse publicity.

Dr Kandiah: Thank you so much.

Notes

¹ Farzad Bazoft. Convicted of espionage and executed in March 1990.

² Gp Capt Niall Irving.

³ Col Barry Stevens.

⁴ The President's National Security Advisor, 1989-1993.

⁵ Foreign Secretary, 1989-1995.

⁶ Kevin McNamara.

⁷ Leader of the Opposition, Neil Kinnock.

⁸ Michael Mates, MP for Petersfield and Chairman of the Defence Select Committee.

⁹ Mrs Thatcher's Press Secretary, 1979-1990.

¹⁰ The Leveson Inquiry into the press following the News International phone hacking controversy, 2011-12.

Viewpoints

Reality of War

Tornado GR1 1,000lb GPB Low-Level Loft Delivery (17 Jan 1991)

'I Love Him and I Want His Babies'

An Airman's Perspective on the Reality of War

By Wing Commander Mike Toft

Introduction

Just before dawn on the 17th January 1991 the bombs were to rain across the Hardened Aircraft Shelter sites at both ends of the Iraqi airfield. Precision Bombing was not an option. Instead the four Tornado bombers were to attack the airfield at low level and when close enough, each aircraft would climb steeply to each throw eight 1,000 lb bombs at the target. After bomb release a 135-degree wingover would allow the aircrew to egress from the target toward friendly territory. Under the cover of darkness the risk to the aircrew would be minimised. That was the plan.

Tension amongst the aircrew had been rising steadily with the approach of the UN deadline for Iraq to withdraw from Kuwait. The deadline had passed. On the way to the Ops building the bus was filled with the usual banter amongst the formation. It was expected that we were to fly yet another training mission around the Saudi Arabian desert. But on entering the flying clothing section we met Nick, from another formation, who said, 'We're going, we're bloody going!' Stunned silence. My pilot, Mark (Mr Pastry), and I just looked at each other. He had joined us from another squadron after my original pilot had stayed in Germany on compassionate grounds. I had been concerned to learn that Mark had not been allowed to fly on Exercise RED FLAG because he had too few hours on the Tornado. RED FLAG was the closest thing to war without getting shot at. By 17th January, we had flown together for about 10 weeks and over time had discussed all our options if we should ever go to war; what we would do if we were shot down etc. Our time had come.

The banter had ceased and we changed in to our flying clothing in silence, alone with our thoughts. My thoughts were with my wife and 2-year old daughter back home. She would

soon discover that war had broken out and her worrying would intensify. She was to have her own battles at home - this was no time to be 8 months pregnant! At least my daughter was too young to realise what was going on. Would I ever see our second child? And what about my parents? And what about...? And what about...? And then there was the fear of the unknown.

Soon we received an intelligence brief and received our 'target for the day'. The mission had been already been planned which was not helpful because I always wanted to be involved with the intricacies of the plan so that I knew every little detail. Instead we had to unravel the thoughts of those who had planned it. The plan included a long haul to the west twice using air-to-air refuelling before dropping into low level before the Iraq border. Once over enemy territory ('Sausage Side') the route zigzagged across the desert in order to keep the Iraqis guessing our intentions. The route home was effectively a straight line to the Saudi border before air-to-air refuelling once again. Due to the serviceability problems of the Tornado in Germany, we had always joked that the typical Tornado mission was planned as a four-ship, flown as a three-ship and come back as a two-ship. Hopefully that was not to be the case.

After a meticulous but nervous brief the time had come to walk to the jets. Booted and spurred and armed with a Walther PP and other accoutrements we 'stepped' at just the wrong time because returning to Ops were the crews who had just come back from the first wave of attacks on Iraq. The look on their faces said it all. But there was no turning back now. Surely the cover of darkness would keep us safe. However in a headquarters somewhere in the desert a shiny-panted-rubber-desk-blotter-jotter had got it wrong. There had been an error over Greenwich Mean Time and Local times because outside the sun peeked over the horizon. In an instant Operation Desert Storm had become Operation Certain Death. Bugger.

Out on the line the ground crew were as keen as mustard to know where we were going and how long we would be. These men were outstanding. They toiled for hours in the blazing heat to ensure that the jets were as ready for war as they could be. Notwithstanding that, almost immediately No. 2 had problems with their jet and had to run for the only spare aircraft. Next to us, No. 3 had also developed problems and their ground crew frantically tried to fix it. Jack was OK! Our jet (No. 4) was fine... until the last few minutes when it also developed fly-by-wire problems. The crew chief announced that No. 2's original jet was now fixed and so Mark and I made a run for it. We were not having a good time! Eventually the crew chief waved us off and it seemed like most of the detachment were out there wishing us well and waving us off. When take-off time came, No.3 was still unserviceable and was to miss out on 'the big push'. The proverbial four-ship had become three.

The route along 'the Olive Trail' with the Victor Tanker was uneventful. For a second time the Tornados topped up with fuel for the 80-minute flight over enemy territory. The jets were now very heavy; full of fuel and with eight 1,000 lb bombs slung underneath. After leaving the tanker it seemed that Mark asked me for the range to the border every 30 seconds. I shared

his concern. The brown line on the map marched down the display at 450 knots and we soon found ourselves 'Sausage Side'. Heartbeats became closer together, the adrenalin pumped, and the fear of the unknown was soon to become the fear of the known. Bugger. The further we flew the faster we could fly and eventually we sat at a comfortable 480 knots. Since crossing the border we had not been above 100 feet. Twice I looked at the Radar Altimeter and both times it read around 50 feet. The desert was as flat as a pancake but we still felt exposed and very vulnerable even at 50 feet. We pressed on.

On the way to the target we only saw two things of significance. First we passed an Early Warning radar site but that was a smoking hole thanks to a C-130 Gunship earlier on that day. Secondly, Mark asked me 'what the Hell is that on the nose?' 'I don't know but it's not military' was my reply. Ahead of us on the desert floor was a large black patch that looked like an oil slick. There was no time to go around it whatever it was. At 50 feet and eight miles a minute there was no time to make out that it was a large herd of goats. I'm sure it took the Bedouin hours to gather them together again.

Approaching the target the aircraft was still heavy and we needed more speed, at least another 70 knots, to be able to perform the dreaded daytime loft manoeuvre. To do so we needed to use afterburner which was a worry to both of us as it would provide an ideal target for any infra-red missiles out there. We made a wild-assed guess when it would be most appropriate, the reheat kicked in and we were soon at 550 knots for the pull-up. I took a quick squint on the radar and identified the aiming point. Now less than two minutes to the target all the switches were double and triple checked. This was definitely not the time to screw up. The seconds approaching the pull up point seemed to pass in double time and it was time to expose ourselves to the airfield defences. During the loft manoeuvre the seconds felt like minutes but eventually the bombs came off. Throughout the manoeuvre Mark and I were 'heads in', or on instruments, which may be just as well because I remember seeing black puffs of smoke in my peripheral vision. Perhaps it was best to pretend to be in the simulator! Chaff, Flare, Chaff, Chaff, Flare, Chaff, Flare. My life had become immersed in the small lights on the Electronic Warfare suite as they illuminated and distinguished. Eventually the nose came to the horizon and we could ease off the bank and start our descent to low level again. It may have been seconds or minutes when No. 2 piped up on the radio and the reality of war struck the whole formation - 'We've f**ked up and have still got our bombs'. 'Get rid of the bombs and let's get out of here', called the leader. Soon No. 2 called back, 'We're on fire, 'may have to get out'. Then silence. The leader tried to raise them a couple of times but to no avail.

With our payload gone we ran away bravely at 600 knots. The leader contacted the ever watchful AWACS to report the downed aircrew in a hope that the search and rescue boys may be able to pick them up. But that was unlikely as it was so early in the morning. They too preferred to operate in the relative safety of darkness. The Saudi border marched down the moving map display at ten miles per minute. Too slowly for our liking! Once over the border we could relax but not before climbing to height for another plug into the tanker which

had waited for us. The journey home was quiet. Apart from the routine system checks Mark and I hardly spoke as our thoughts were with the buddies that we had left in Iraq. Had they managed to eject, or had they gone down with the aircraft? There was no way of knowing. The relief to be safely on the ground again was overwhelming and we were so glad to get out of the cockpit in which we had spent 5 hours strapped to our 'bang-seats'. The ground crews had already been informed that No. 2 was not returning and they were in a sombre mood too. The four-ship had been flown as three-ship and had indeed returned as a pair. After time for contemplation at the aircraft we wandered over to the line hut to sign the jets back to the engineers. The engineers felt the mood we were in and quietly and sombrely went about their business. It was the Squadron Warrant Officer, Pip Curzon, who made all the difference that morning. 'Corporal,' he called out, 'chairs and tea for the Officers.' The reality of war had struck right at the heart of the Squadron.



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Viewpoints

Reality of War

Tornado GR1 JP233 Delivery (17 Jan 1991)

‘Cluck cluck... Gibber, gibber... My old man... Sa mushroom’

An Airman’s Perspective on the Reality of War

By Wing Commander Andy Walters

Introduction

On 15 January 1991, the long-awaited UN deadline for Saddam to vacate Kuwait came and went. But the next day, we were all called into the Pilot Briefing Facility (PBF). We crammed into the interconnected series of buried ISO containers with their struggling air conditioning where our Detachment Commander (DetCo) revealed each formation’s target for that night on an ISO-sized wall map. Our 4-ship’s target was tucked way up in the top right-hand corner, just west of Baghdad. It was going to be a very long flight to bomb the expansive runways at Al Taqaddum¹ with our JP233s airfield denial weapon². DetCo reassured us that our formation was sequenced at the tail end of a large Coalition ‘package’ which would have suppressed the airfield’s defences before we arrived.

Our Wing’s initial missions had already been planned by the Squadron Commander and his Nav, the Squadron’s Weapons Leader. But our four crews set to refining their plan. As the junior crew in our 4-ship, our attack was to be straight ‘along’ the length of the runway to drop 60 SG357 cratering sub-munitions and 430 HB876 anti-personnel mines, while the other, more fortunate, crews were to attack ‘across’ the runways to cut the operating surfaces into short lengths. To focus our minds, my crew was asked to commence dropping our JP233 ‘stick’ short of the runway to take out the Roland surface-to-air missile (SAM) system positioned on the extended centreline.

With planning more than complete, we found ourselves with five hours to spare before needing to brief. So we drove back to our British Aerospace ‘married quarter’, a flimsy, two-bedroom tin-roofed bungalow, with beds crammed into every room other than the bathroom. This had been home to the eight of us since we had arrived in mid-November. When not flashing around the Great Nefud desert at very low levels, our main entertainment had been watching *Blackadder*

Goes Forth on a portable TV that had been generously donated to us. So, we crammed around the small screen, chuckling and pre-empting the punch lines. Four hours and six episodes later, twilight was upon us and Blackadder's team were just clambering out of their trench into a deadly wall of German machine gun fire on 'Operation Certain Death' when our formation leader's finger punched the video's clunky 'stop' button: 'Time to go, chaps'.

We drove to the PBF across the totally blacked-out base in silence, passing a local military vehicle whose driver had taken the black-out a little too seriously and driven into a tree with his headlights out.

Our formation was to be the first to brief and get airborne. Our flight commander started the brief but was gently told by the DetCo, sitting on the back row, to slow down. Briefing complete, we climbed into our crispy, virgin NBC⁴ suits, flying kit and combat waistcoats. The RAF Regiment wing commander signed us out our Walther pistols, gold sovereigns, goolie chits⁵ and two clips of ammo. 'Only two clips...?' I questioned. He started to talk about 'standard scaling', etc. when reality dawned on his face, and he handed me a heaped handful of spare rounds. I shovelled these into the deep pockets of my flying jacket where they stayed until I found them several months later once back in Germany. The whole ops team lined the exit to the PBF to wish us 'God's speed', a ritual they repeated until the end of hostilities.

We reached the jet in good time. It squatted ominously in the warm, moist darkness under its maximum weight of bombs and fuel, festooned with twice the normal number of gently fluttering safety pin ribbons for the pylon ejector release units, JP233s, AIM-9 Sidewinders and flare pod. Having climbed into the cockpit and found somewhere to stow our NBC respirators, the training snapped in and we busied ourselves with pre-flight checks, our hands knowing exactly what to do. We quickly found that the fly-by-wire 'CSAS' system was unserviceable. Fortunately, we had two spare aircraft, albeit we had been warned that the second spare had the new 2250-litre under-wing fuel tanks, recently adopted from the Tornado F3, which the test pilots had reported were not optimised for ultra-low or terrain-following flight 'sausage side'⁶. So, we jettisoned our aircraft, grabbed our kit and worked up a mix of sweat and tension rushing to the spare. With little excess time, we clambered aboard and rushed the checks. This time, my Nav found that the SkyShadow ECM⁷ pod was failing its Built-In Test – a piece of kit deemed vital to penetrate Al Taqaddum's SAM defences. It was time to try our third Tornado of the evening. As the wagon sped us over to the next revetment, the rest of our formation were already getting airborne, their afterburners disappearing off into the blacked-out sky.

This time, I checked nothing but the weapon settings on the rear of the JP233s and my bang seat. Radio silent 'EMCON' procedures⁸ were an excuse not to let anyone know that we were probably going to be too late. But we weren't going to be left behind on Night One! It's remarkable how quickly you can be ready to taxi when you don't do your pre-flight checks. The groundcrew disconnected their headset. Now it was just me and my Nav.

We kept the burners in to 450kts to make up some time and, having carefully navigated the safe route out of the base defence zone's HAWK SAM, we encouraged our heavily-laden Tornado towards the tanker. But our radar revealed nothing but empty airspace at the planned rendezvous (RV). Scanning increasingly widely, my Nav found an inviting gaggle of aircraft which we closed upon. It became apparent that the tanker was at the normal peacetime RV rather than the slightly amended wartime towline. To the surprise of the rest of the formation, we bobbed up alongside them, sucked some fuel and headed north on the tanker trail.

Well short of the Iraqi border, we dropped off the tanker, accelerated and dived to low level on our Terrain Following Radar (TFR), completing our 'fence checks', which included arming our JP233s, AIM-9 Sidewinders and 27-mm cannons, preselecting our under-wing tanks for jettison in case we needed to evade any SAMs, switching our radars to war mode, reviewing our 'Escape & Evasion' plan and extinguishing the external lights. We knew the other three crews were in our planned widely-spaced 'card' formation, but couldn't see them – isolated from our virtual colleagues, but bonded by camaraderie and intent. The Iraqi border marched down our moving map displays at eight miles a minute. As we crossed 'sausage side' I had the feeling of trepidation that would repeat itself 26 times over the next few weeks and hundreds of times over the next 12 years.

Our world was now as black as a witch's tippie. Even the Moon was blacked out, denying us the sensation of 200 feet and 480 knots. Our sensory isolation was only broken by the occasional headlights of 4-wheel drive wagons driving across the desert almost level with us. But the cockpit lighting was far too bright, despite the plethora of rotary rheostats selected to their 'fully dim' position - Panavia's designers clearly hadn't experienced our envelopment in absolute, boundless darkness.

Deep inside Iraq, we could see afterburners being engaged high above us, the streak of air-to-air missiles coming off rails, a short flash, then the tumbling of a burning aircraft some way off. We felt fortunate to be way down here at low level! A few minutes out from the target, a remarkable, distant sight grew in our right one o'clock. I drew my Nav's attention to the silently twinkling hemisphere of detonating AAA shells, saying 'I'm glad we're not going over there!' He responded '90 seconds, next turn, right 30 degrees'. As the TFR hugged the dunes and gently turned us right, the mesmerising, glittering hemisphere gradually slid right-to-left, before settling on the nose as our wings rolled level. 'Visual with the target'.

We accelerated again, checking our weapon switches for the 'n'th' time. As we drew closer, the hollow dome of twinkles became filled with slightly dimmer tracer, so thick that it appeared impenetrable. 'Operation Certain Death' sprang to mind. We could now see the nav lights of the US Navy A6 Intruders bombing Al Taqaddum from medium level ahead of us, determinedly diving through the scintillating dome at high angle into its tracer-filled interior before climbing away. But so much for them suppressing the defences – Taqaddam was awake! We flashed across a dual carriageway inappropriately illuminated by the headlights of civilian road traffic. Didn't they know there was a war on?

Settling into our attack run, my Nav made a quick squirt of his radar in war mode to fix our nav kit. Our track took us over the huge expanse of Habbinaya Lake, immediately south of our target. The Mobile Met Man had assured us that the lake was full to the brim, given the recent rain. Intel had plotted a very nasty SAM-8 on the lake's right bank whose Missile Engagement Zone we would have to penetrate. We crossed over the water and were now inside the twinkling dome. Each line of unguided tracer rose lazily at first, then suddenly accelerated and whipped past our ears. I resisted the instinct to duck. Instead, we disconnected the TFR and descended to below 100 feet to avoid the AAA and SAMs. The TFR's 'E-scope' display warned us that we were below its minimum height of 200 feet by brightening up so much that the glare made it unusable. All four aircraft were unaware of the 70-foot high cliffs that lined the rapidly approaching shore...

Now, the Tornado was designed to operate at low level. But its radar altimeter had a known habit of cunningly 'unlocking' (ie, suddenly reading zero) below about 50 feet – just when you really need it. The German and Italian air forces modified their 'radalts' with a filter so they operated down to zero. The MOD's 'pen pushing jotter blotters' had taken a different approach and stated that there was no requirement to fly below 200 feet. Well, there was tonight...

As we grazed over the top of the cliffs, our radalt unexpectedly 'unlocked', leaving us without any height data and causing various compelling red and aural warnings. 'Pull up, pull up!' my Nav shouted, as I sharply pitched up, apexing at about 250 feet. Our Radar Homing and Warning Receiver (RHWR) then indicated we were locked up by AAA radars, and some of the blindly-firing tracer immediately slewed towards us. 'Get down, get down!' offered my Nav as I hastened back down to our weapon release height of 180 feet. The tracer reverted to barrage mode as our SkyShadow ECM pod's active jamming light gently glowed. An 'R' for Roland appeared on the nose – at least we were on track! Fifteen seconds to weapon release. Our world was now a blaze of lights and we could smell the cordite from the Iraqi AAA ingested by our engines. We made one last check of the switchology and I pressed hard on the control column's Weapon Release Button (termed 'committing'), giving the aircraft's Main Computer permission to release the JP233s in 3... 2... 1... and... absolutely... nothing... happened...

My brief thought that 'this JP233 is a really smooth weapon!' was shattered by my Nav shouting 'Commit, commit!!!' 'I am...!!!' I quipped. Another check confirmed our weapon switches were all good. So, having penetrated what we later discovered was 148 individual AAA positions, surprised Lake Habbinaya's cliffs, bounced over a Roland, we then flew beautifully straight and level along the runway for twelve seconds without dropping a single one of our 490 sub-munitions.

We hadn't yet exited the pleasure-dome but I had a head-full of contradictory thoughts. 'Never re-attack' is a fundamental rule. But our aircraft had the big external tanks so, whereas everyone else was now on minimum fuel, we had 1200 Kgs for another go. In hindsight, this was the

selfish thought of an unmarried, task-focussed, 27-year-old pilot. My Nav, albeit the same age, had a wife and three young children back home, and I'd promised them that I'd look after him. Two sharp thumps through the airframe and the decision had been made. My Nav punched off the lame JP233s and consigned them to the desert. Now outside the main hemisphere and subjected to a little less tracer, I made a habitual check of our fuel. We'd lost 1200 Kgs! 'Shit' was the response from the back – 'I've punched off the tanks, not the JP233s!'. Three sharp thumps followed as first the left-hand SG dispenser, then the right, and finally both HB dispensers punched off the aircraft at 300 millisecond intervals. Our insubordinate JP233s were finally gone.

Now, the Tornado had been in service many years, yet a few days beforehand, someone had miraculously discovered that if you fired the laser rangefinder (the primary height sensor) with live weapons, the aircraft's Main Computer could reject the inertial navigation system's input (the primary attitude sensor), leaving you reliant on a very lackadaisical 1950s back-up gyro called the 'SAHR' and an even older Doppler radar to point the aircraft in the right direction while TFR'ing at 200 feet and 500 knots. So we purposefully hadn't used the laser. But my Head Up Display symbology was now very, very wobbly...

My question concerning our nav mode was answered by a short quip of 'the IN's off-line...' We tried to reselect it, to no avail. To distract my Nav from his angst, I suggested he complete the 'Doppler/SAHR' checks. A few seconds later, all the HUD data disappeared in a brief green flash coincident with a simple, sharp retort of 'bugger' from the back.

The SAHR had a somewhat sticky rotary switch labelled 'free' (the normal mode), 'slave' (for when the INs weren't working) and 'off'. In hindsight, this isn't a good combination of functions, as we discovered as my Nav overshot 'slave' and turned the whole system off. So now I didn't even have any 1950s technology as we approached a WMD site⁹ defended by a SAM-6. I found myself staring at an E2B bubble compass that looked like the thing my father stuck inside his car windscreen, the head-down artificial horizon (only used during QFI instrument rating torture sessions) and a now unstabilised TFR E-scope (that was STILL too bright). 300 feet seemed a better height right now.

We'd agreed as a formation to break radio silence briefly off target with an encoded Blackadder quote to confirm we were all still there. Sometime during all this excitement our formation leader called 'Cluck cluck'!... 'Gibber, gibber' we responded. 'My old man'... 'Sa mushroom' followed sequentially from numbers 3 and 4. Unexpectedly, we were all still there. We headed south and left the AAA behind us.

The SAHR eventually realigned itself. I was now very grateful for its 1950s technology, although we weren't entirely sure where we were. We crossed the Saudi border with relief and switched the external lights on as we passed a pre-designated line a little further south. To our surprise, the lights of our other three formation aircraft were vaguely where we hoped they'd be,

despite our meandering nav kit. We climbed up to medium level on vapour-filled internal tanks. The RHWR showed a friendly F15 fighter closing from our left 8 o'clock. 'So NOW we've got an escort' I thought, picking up his dim formation lights visually. Depth perception is always difficult at night, but he seemed to be closing rather quickly. He went belly-up to us, blooming in the canopy. I bunted fully forward just before the F15 slashed through the airspace we should have been occupying and disappeared into the murk, never to be seen again.

We closed up with our formation leader. At least THEY knew where they were. 'Homeplate' appeared on our moving maps along with our next challenge. We trusted the base defence HAWK only slightly more than Taqaddum's Roland. It had been rumoured that this SAM had been left on automatic and had shot down a host nation aircraft sometime in the past – no doubt an unfair myth, but we treated it with due respect. So we stuck close to our leader as he navigated the base defence zone's safe lane. As we lined up on long finals, the runway lights were obligingly switched on, welcoming us home. But we weren't trained in night formation landings, so I reduced speed even more and gradually fell into trail behind our leader. Just as we flared, we hit his wake and experienced some unexpected and unusual attitudes, before landing rather firmly a couple of times. My Nav commented that this was his most frightening moment of the night.

Climbing out into a crowd of waiting groundcrew, we felt strangely embarrassed about the missing under-wing tanks. The ecstasy of having survived and the frustration of not having dropped were replaced by the sudden realisation of having to repeat the whole thing again the next night. It transpired that a Main Computer pulse failure had stopped the JP233s from releasing. Fortunately, we banished our demons the next night when our 4-ship achieved four perfect cuts across the runways of another very heavily defended Iraqi airfield.

Twelve years later, I found myself landing at Al Taqaddum in a Blackhawk helicopter and examining the repaired craters in its runway caused by my colleagues' sub-munitions. I even briefly stood in an eroding revetment once occupied by a Roland.

Notes

¹ Al Taqaddum was originally built by the RAF in 1952 as an extension airfield to RAF Habbaniya to accommodate the larger jet aircraft which could not land at the original 1930s RAF airfield nearby.

² The JP233 airfield denial weapon was originally developed as a collaborative programme between the UK (Hunting Engineering) and the USA (where the USAF intended to employ it on the FB-111) but after the US pulled out due to rising costs, it was brought into service by the UK alone. The Tornado GR1 carried two large pods on its shoulder pylons, each pod carrying both types of sub-munition.

³ *Blackadder Goes Forth* was a 1989 satire on the First World War; it was the fourth and final series of the BBC sitcom *Blackadder*, written by Richard Curtis and Ben Elton.

⁴ Nuclear, Biological and Chemical (NBC).

⁵ A goolie chit was originally known as a blood chit. It is a notice carried by military personnel and addressed to any civilians who may come across an armed-services member – such as a shot-down pilot – in difficulties. As well as identifying the force to which the bearer belongs as friendly, the notice displays a message requesting that the service member be rendered every assistance. The gold sovereigns were intended as an added ‘incentive’ to anyone assisting the aircrew.

⁶ ‘Sausage side’ was slang for enemy territory and is a reference taken from the 1989 TV comedy *Blackadder Goes Forth*.

⁷ Electronic Counter Measures (ECM).

⁸ Emission Control (EMCON).

⁹ Weapon of Mass Destruction (WMD).

Selected Tornado and Jaguar Mission Reports for the Period 16th January to 23rd February 1991

Introduction by Group Captain Paul Wilkins

The following pages contain a selection of Mission Reports (MISREPs) from Royal Air Force (RAF) Tornado GR1 and Jaguar GR1 aircraft participating in Operation GRANBY, the UK's contribution to the First Gulf War in 1991. It was these 2 aircraft types that conducted the majority of the UK's fast-jet attack sorties in the campaign¹. These MISREPs have been recently declassified thus permitting their use in this journal. In places, it has been necessary to redact some details, for example, the names of the aircrews involved, but essentially they are reproduced here *verbatim* from the primary source material they represent.

The period 16 Jan to 23 Feb 1991 covers the first night of the offensive air campaign through to its thirty-eighth. Collectively, these MISREPs tell 2 types of contrasting story. The first is one of evolving tactics, techniques and procedures (TTPs) utilised by the respective Tornado and Jaguar aircrews; these were different mainly because of the types of missions they were assigned. The Tornado flew predominantly against well-defended airfield and infrastructure targets, often deep within Iraq, which meant they operated mostly at night until their move to medium-level and daylight-biased operations on 20th January. In contrast the Jaguar was tasked predominantly against fielded Iraqi Army formations such as artillery and surface-to-surface missile batteries on the Kuwaiti coast. A more diverse and dynamic tasking regime, saw them also directly target Iraqi naval surface forces in the Northern Arabian Gulf. RAF Jaguars flew almost exclusively during daylight.

The evolution of TTPs as the air campaign progressed is well known but when viewed through the lens of human emotion – the second story told by these MISREPs – then their real value to the literature available on this part of the RAF's history is much clearer to see. First, all of these

¹ The HSA Buccaneer S2 also deployed to the Gulf region towards the end of this period primarily to provide laser designation services for Tornado GR1 aircraft via the Buccaneer's podded Pave Spike system. Although they did subsequently conduct some attack sorties of their own, their overall number (approx. 200 sorties) was much less than both the Tornado GR1 (over 1,500 sorties) and Jaguar GR1 (over 600 sorties).

reports² arguably demonstrate the professionalism and quality of RAF flying training as both sets of aircrews report their incidences and observations in a calm business-like manner. But over the time period they cover, other emotions are also clearly discernible.

For the Tornado aircrews there is growing apprehension as the significant threat from anti-aircraft artillery (AAA) and surface-to-air missiles (SAMs) during low-level attacks becomes apparent to them. Replaced by an almost palpable sense of relief when attacks are switched to medium-level it changes again almost as quickly to one of rising frustration. This is a result of the limited effectiveness of the unguided weapon employment methods available to the Tornados against dispersed targets. This evaporates rapidly when the first mission employing precision guided munitions (PGMs) targeted by the Pave Spike laser designation pod fitted to the Buccaneer occurs on the seventeenth day of offensive air operations.³

The human emotions are more difficult to detect in the reporting by the Jaguar aircrews, probably due in part to the different way MISREPs were compiled when compared to their Tornado colleagues.⁴ The sense of early apprehension evident in the Tornado MISREPs is simply absent although perhaps the lack of a narrative style and the less well defended targets they were flying against played a part here. Jaguars delivered nearly all of their weapons from medium-level dive attacks⁵ and they received [ineffective] Iraqi surface-to-air fire only infrequently.⁶ There was however some of the same frustration in evidence albeit its root causes were different. Principally for Jaguar pilots, this derived from poor weather denying visual identification of their targets or other coalition attack formations operating in the wrong place, at the wrong time and compromising the Jaguar missions.

Overall, the RAF's Tornado GR1s and Jaguar GR1s conducted over 2,000 attack missions during the First Gulf War and therefore the de-classified MISREPs that follow are just a small snapshot of the whole. They do however arguably tell a story, one that is both factual and also requiring some interpretation; this introduction offers just one such view of those events from early 1991.

² It was usual for MISREPs to be compiled by operations and intelligence staffs during post mission debriefs on behalf of aircrews, ie, they were rarely written by the aircrew themselves. Nonetheless, the human emotions prevalent at the time have been clearly transmitted from the aircrew to the operations and intelligence staff drafting them.

³ It should be noted that two early-development Thermal Imaging And Laser Designation (TIALD) pods were also deployed around this time and utilised by the Tornado detachment at Tabuk for buddy-designation purposes.

⁴ The RAF Jaguar detachment at Muharraq appears to have utilised an early-generation, secure IT system (Air Staff Management Aid (ASMA)) to compile and transmit its MISREPs. This electronic box filling methodology has unfortunately resulted in high utilisation of acronyms and abbreviations for brevity meaning Jaguar MISREPs lack the more easily followed narrative style of the Tornado MISREPs for whom, this approach, presumably, was not available. A template identifying each 'box' of the Jaguar MISREP format thus precedes the official reports to aid their interpretation.

⁵ This included: 1,000lb free-fall bombs; CBU-87 cluster bombs; CRV-7 unguided rockets; and 30mm Armour Piercing/High Explosive cannon fire. The exception was the use of a BL-755 cluster bomb on 31 Jan which was delivered at low level.

⁶ No RAF Jaguar was lost or damaged by enemy action.

ATTACK ON AR RUMAYLAH SOUTH WEST AIRFIELD - 17 JAN 91

AIM

1. The aim of the mission was to disrupt enemy air operation at Ar Rumaylah South-West airfield.

PLAN

2. The task called for 4 aircraft to attack Ar Rumaylah South West airfield which lies 40nm south west of Basra between 0630Z and 0645Z. The airfield was a DOB for CAS aircraft and consisted of a main runway, parallel taxiway and 2 HAS sites, one at each end of the airfield. Because of the daylight TOT and the small size of the attacking force, we decided to delivery 1000lb freefall bombs from a low level toss manoeuvre, into each of the HAS sites. Each HAS site would thus receive 16 bombs. The attack was planned to have 2 aircraft in the toss manoeuvre together, separated laterally by 1.5nm. The second element would follow the first using visual spacing to deconflict from each other. The TOT of all aircraft could thus be compressed to approximately 15 secs. The attack was part of a USMC package of twenty-four F 18 targetting SA 6 to the east of the airfield two EA6 aircraft providing electronic support.

TEXT REDACTED

EXECUTION

4. Outbound Transit. Unfortunately the No 3 was unable to engage the flying control system of his aircraft and therefore had to ground abort. The remaining 3 aircraft took-off and effected a rendezvous with 2 Victor tankers west of Mahurraq. AAR during the transit was uneventful.

5. Ingress and Egress. The formation ingress to the target is visual escort formation flying at ultra-low level. Whilst numerous small fires were seen, presumably from targeted EW sites, no interception or SAM engagements were encountered. During the egress, however the lead aircraft was locked-up

by both SA 8 and Roland systems. Both locks were broken by chaff and low flying.

6. The Attack. On approaching the target the aircraft accelerated to 580kts and pulled up in dry power to deliver their weapons. Chaff and flares were deployed during the manoeuvre. The lead and No 4 aircraft successfully delivered their weapons onto the southerly HAS site and recovered safely at low level. Both aircraft report AAA fire commencing during the toss manoeuvre. The No 2 aircraft also pulled up to deliver his weapons, but reported shortly afterwards that their attack had failed. This transmission was followed by another, informing the lead that the No 2 had indications of an engine fire. A final transmission from the No 2, made approximately 40nm west of the target indicated that the crew were about to eject from the aircraft. The No 4 passed the ejection position to AWACs in order to notify the SAR organisation.

7. Homebound Transit. Having left Iraqi airspace the 2 aircraft rendezvoused with the Victors at FL100. After the AAR the aircraft climbed to FL270 and transitted home landing uneventfully after a 4 hour sortie.

CONCLUSION

8. Only 2 aircraft delivered their weapons onto the target and therefore the disruption caused to enemy operations must have been slight. A small attacking force against a relatively large target does not allow much flexibility. Operating by day, at low level, against heavily defended targets probably cost the Sqn an aircraft and resulted in one crew being held POWs.

ATTACK ON TALLIL AIRFIELD - 17 JAN 91

AIM

1. The aim of the mission was to disrupt enemy air operations at Tallil airfield using 8 Tornados delivering JP233 weapons.

PLAN

2. The task called for aircraft to attack Tallil airfield which lies 150nm to the South-East of Baghdad and 90nm west of Basra between 0108Z and 0115Z on 17 Jan 91. The airfield was an MOB for Fulcrum, Fishbed and Fitter aircraft and consisted of 2 main runways, 2 parallel taxi-ways and 4 HAS sites, one at each corner of the airfield. We decided to split the aircraft into two 4 ships attacking at 90o to each other.

Each aircraft was allocated a separate DMPI and using across JP233 deliveries, we planned to cut-off the HAS access splines, and cut the main runways in 4 places. The low level route to the target would be flown in 3nm parallel track formation with 40 secs between elements. The final attack would be flown with 20 secs between attacking aircraft. The task was part of a USMC package which included A6 aircraft aiming to bomb Scud missile storage facilities at Tallil airfield between 0100Z and 0105Z. The USMC package also provided for SEAD support from EA6 and F18 aircraft.

TEXT REDACTED

EXECUTION

4. Outbound Transit. All 8 aircraft took-off at 2300Z on 16 Jan 91; the first mission from RAF Detachment Muharraq in the war against Iraq. The formation rendezvoused with two VC10 tankers approximately 150nm west of Muharraq, although the second tanker failed to turn at the correct point and had to catch up some 8-9 miles before AAR could commence. The transit was flown at FL100 and involved 2 AAR bracket for each aircraft. AAR operations were carried out successfully despite some cloud tops at FL100.

5. Ingress and Egress. The low level routing to and from the target took approximately 40 mins with the Automatic Terrain. Following system engaged throughout except for the final stages of the attack. The routing was uneventful.

6. The Attack. At approximately 30nm from the target a heavy AAA barrage was seen in the target area. The AAA fire appeared to be unco-ordinated and not aimed but continued throughout the attack, indeed was still continuing some minutes after the last aircraft had delivered his weapons. Despite the AAA barrage the first 4 aircraft successfully delivered their weapons on a north westerly heading and the second 4-ship successfully delivered their weapons on a north easterly heading.

7. Homebound Transit. After leaving Iraqi airspace the formation climbed to effect a rendezvous with the two VC10 tankers. This rendezvous was again hampered by the incorrect action of the second tanker and cloud at FL100 made the rendezvous rather difficult. At this stage the leader experienced an oil pressure failure on his left engine and as a consequence shut down the engine once AAR was completed. The leader was escorted home at FL100 by the No2, whilst the rest of the formation climbed to FL270. All aircraft landed safely at Muharraaq after a sortie lasting approximately 4 hours.

CONCLUSION

8. The formation failed to achieve tactical surprise primarily because of the A6 attack immediately prior to our TOT. We believe that were we to attack the target alone and compress the TOT as much as possible tactical surprise would be achieved and the threat from AAA would be reduced.

ATTACK ON JALIBAH SOUTH EAST AIRFIELD - 18 JAN 91

AIM

1. The aim of the mission was to disrupt enemy air operations at Jalibah South East airfield.

PLAN

2. The task called for aircraft to attack Jalibah South East airfield which lies approximately 200nm south-east of Baghdad between 0200Z and 0215Z on 18 Jan 91. The airfield was an MOB of Fulcrum and Flogger aircraft and consisted of a main runway, 2 parallel taxiways and a HAS site in each of the corners of the airfield. In the light of our experience the previous night, we decided to compress the formation TOT as much as possible. We therefore decided to attack DMPI's spread by 1.5nm with 10 secs separation between each aircraft. This profile would allow 6 aircraft to deliver their weapons onto 6 different runway and HAS areas DMPIs in under 1 minute. Thirty seconds later the remaining 2 aircraft would attack HAS access spines at 90o to the main attack, again attacking with 10 secs and 1.5nm separation. The mission was supported by USAF EF 111 and F4 SEAD aircraft.

TEXT REDACTED

EXECUTION

4. Outbound Transit. Shortly after take-off No 4 turned back to base because both his GMR and TFR were unserviceable. The remaining 7 aircraft rendezvoused with a single Victor tanker and this formation then joined up with the VC10 tankers. The transit and AAR operation were uneventful although one AAR basket was damaged.

5. Ingress and Egress. The low level ingress was flown in 4nm parallel track formation with the lead and No2, who would carry out the first attack, approximately 1 minute ahead of the rest of the formation. No enemy activity was observed by any of the formation, until the lead and No 2 flew approximately

3nm to the south of an ammunition dump, AAA started as the aircraft flew past but was ineffective. Approaching the final attack the No 6 pulled away from the stream having had a number of problems with his navigation equipment. The egress routing for lead and No 2 was uneventful. However, the remainder of the formation found that the increased speed of the off-target turn put their aircraft some 3nm north of the planned attack. The actual track unfortunately put them over the ammunitions dump which had fired AAA at the lead and No 2. All 4 aircraft succeeded in escaping from the AAA and the No 7 decided to attempt to level strafe the AAA units. The No 6 re-joined the formation 1 minute stream behind the No 8.

6. The Attack. Approximately 8nm from the target the aircraft accelerated to 540kts. The No 3 reported that no AAA fire was seen until the weapons started to impact the ground. However, the No 7 reported that there was a full AAA barrage in effect by the time he attacked, 30 secs later. The Nos 3, 5, and 7 all reported successful attacks as did the lead and No 2 attacking from the north west. Unfortunately the No 3 mis-identified an aiming offset and delivered his weapons approximately 2nm to the north of the airfield. In so doing the No 8 cut-down his planned separation from the lead and No 2 to approximately 10 secs.

7. Homebound Transit. Upon passing into Saudi Arabia airspace, the aircraft climbed to rendezvous with two VC10 tankers. The tankers were at the briefed height but this was in the cloud tops making a safe rendezvous with the AAR impossible. Unfortunately, the second tanker did not remain in the rendezvous orbit and this caused additional problems for the Nos 5,6,7 and 8. Having completed AAR the aircraft climbed to FL270 to transit back to Muhurraq although the No 6 still carrying his JP233 weapons had to fly at FL120. The aircraft all landed safely after a 4 hour sortie.

CONCLUSION

8. The failure of 3 aircraft to deliver weapons onto the target obviously meant a lessening of the disruption caused to the airfield and it was unfortunate that the 3 aircraft who failed all had DMPI's concentrated in the northern half of the target. It would appear that tactical surprise may have been

achieved by the first aircraft to attack, the No 3. However, the AAA barrage quickly became fully developed and even compressing the TOTs to 10 secs did little to lessen the risk to subsequent aircraft. We believe that aircraft dedicated to suppressing every AAA may help subsequent deliveries of JP233 and intend to exercise this plan in our next mission.

ATTACK ON UBAYDAH BIN AL JARRAH AIRFIELD - 20 JAN 91

AIM

1. The aim of the mission was to disrupt enemy air operations at Al Jarrah airfield using 4 Tornados for the main attack and a further 4 Tornados for defence suppression.

PLAN

2. The task called for aircraft to attack Al Jarrah airfield which lies 90nm to the south-east of Baghdad between 0215Z and 0230Z on 20 Jan 91. The airfield was an MOB for Mirage and Fishbed aircraft and consisted of 2 parallel runways, one parallel taxiway, and HAS sites in the SW and SE corners of the airfield. Given the relatively small size of the attacking force, we decided to concentrate our efforts onto the HAS sites and consequently targeted 2 Tornados loaded with 2 x JP233 against each site. Our experience, gained on previous airfield attacks, showed that AAA fire posed the greatest threat and that in the past this had been stimulated by the detonation of the first weapons to be delivered on target. Hence, we decided to put the first 2 attack aircraft through the target line abreast so that they would be past the weapon delivery point before AAA fire could commence. The problem remained: how to suppress the defences for subsequent aircraft. We decided to load each of the middle 4 aircraft with 8 x 1000lb bombs fused for airburst to be delivered from loft attacks. Our expectation was that the airburst bombs would suppress the AAA sufficiently for the final 2 aircraft loaded with JP233 and following in 40 sec trail to deliver their weapons with minimum risk. The first 6 aircraft would attack as pairs 1½nm line abreast, with 20 sec between succeeding aircraft, for maximum compression. The distance to the target was such that we had to use 2250 litre UWTs in order to complete the mission in place of the usual 1500 litre ones. The support package for the attack consisted of a single EF111 aircraft which was tasked to suppress SAM and AAA acquisition radars.

TEXT REDACTED

EXECUTION

4. Outbound Transit. No 8 was unable to select reheat on the left engine on take off and hence was a ground abort. Shortly after coasting into Saudi Arabia, No 7 reported that he was unable to transfer fuel from the UWTs. After repeated attempts to solve the problem without success, the crew were obliged to return to base. Despite the loss of half the main attack package the lead crew decided to continue with the mission. The remaining 6 aircraft successfully rendezvoused with 2 Victor tankers approximately 150nm west of Bahrain. The transit to the Iraqi border was planned at FL90 and included 1 AAR brackets. Unfortunately, at this height the formation encountered cloud and associated severe turbulence which made AAR very difficult particularly at the high AUWs involved. Safe routing procedures and the weight of the Tornados prevented a climb above the cloud layer and so the crews, none of whom had tanked at such high AUW before, had to make the best they could of the conditions. The net result was that 3 had to make the best they could of the conditions. The net results was that 3 of the 4 wing refuelling baskets were damaged to varying degrees during the first AAR bracket. The No 2 crew was sent to the rear tanker in order to make best use of the available baskets. The formation continued towards the end of the tanker trail, some 450nm west of Bahrain, taking fuel when and where possible. During the final stages of the transit, further cloud and turbulence again interfered with AAR operations to the point where it was impossible even to remain in contact with the baskets. The Victor crews attempted to climb out of the turbulent cloud tops but this proved impossible at the AUWs involved and hence tanking remained extremely hazardous. The tankers continued on beyond the planned drop off point in the hope of finding better conditions and eventually set up a race track further to the north. At this stage the lead crew had sufficient fuel to delay the TOT by a maximum of 6 minutes. At the end of this time, Nos 2 and 3 were in position to continue and so the 3 aircraft set off in formation towards the Iraqi border. Some 3 minutes later, No 5 having successfully taken on fuel, elected to try to catch up with the formation enroute to the target. There was insufficient time remaining within the TOT bracket for Nos 4 and 6 to refuel and so they returned to base with their weapon loads.

5. Ingress and Egress. The low level routing to and from the target took approximately 80 minutes and was planned as 4nm wide parallel track formation with 30 sec between elements. Automatic Terrain Following was used throughout except for the final stages of the attack run which were flown manually. No RHWR warning of note were encountered on either the inbound or outbound transit. About 10 mins into enemy territory, AWACs requested a deviation from track in order to search an area believed to contain downed aircrew. No 5, already delayed off the tanker, reduced speed and, once over the specified area, briefly turned on his lights and searched using NVGs. Unfortunately, nothing was seen of possible survivors. However, this action prevented No 5 from rejoining the rest of the formation and so he continued alone.

6. The Attack. Approximately 8nm from the target, Lead and No 2 accelerated to 540 kts. At about 3nm from the target, intermittent AAA fire started and rapidly developed into a full scale barrage which enveloped the target area. The 2 crews pressed into the barrage and successfully delivered their JP233s onto the planned DMPIs. The crews reported that the general elevation of the AAA fire was lower than that experienced on previous missions and both experienced airframe buffeting from AAA exploding around the aircraft. Twenty seconds later No 3 delivered 8 x 1000lb bombs but reported that the toss manoeuvre took the aircraft right into the heart of the AAA barrage. Both crew members were aware of tracer and explosions both above and below the aircraft. reported that the enemy fire was extremely disorientating and that the recovery manoeuvre took the utmost concentration as a result. Three minutes later No 5 delivered another 8 x 1000lb bombs and reported experiencing the same problems as No 3. In addition, [TEXT REDACTED] the No 5 crew felt that the detonation of No 3's bombs had little discernable effect on the weight of the AAA fire emanating from the target. On checking fuel reserves post the attack No 2 was obliged to jettison UWTs, No 3 twin store carriers, and No 5 both UWTs and twin store carriers, in order to ensure safe fuel margins for the return of the tankers.

7. Hombound Transit. Once clear of Iraqi airspace the 4 aircraft climbed to FL80 and successfully rendezvoused with

2 VC 10 tankers. After completing AAR, the aircraft climbed to sanctuary level and turned for home. During the course of the mission unbeknown to the crews, the duty runway at Muharraq was changed from 30 to 12 and in addition unforecast low cloud and fog had formed over the entire area. None of these facts was passed to the returning crews and the result was that the aircraft, once again approaching fuel minimum, had to descend from FL270 and make an approach to the airfield from a range of 30nm. Despite these last minute problems, all 4 aircraft landed successfully having broken cloud at approximately 150ft from internal aids approaches after a sortie lasting just over 4 hours.

CONCLUSION

8. The first 2 aircraft failed to achieve surprise, suggesting that the Iraqis had developed an effective early warning system. Furthermore, the resulting defensive barrage was directed at both low and medium level indicating that the Iraqis had recognised the threat posed to them by aircraft attacking from low level. It was disappointing to note that the airburst 1000lb bombs had little apparent effect on the AAA fire. Furthermore, concern was raised that the loft maneouvre took the aircraft, not only into the heart of the AAA barrage, but as a result, tested the considerable skills of 2 of the most able and experienced pilots on the Sqn. In the light of these facts, we have conducted a review of our tactics and have decided that there is little advantage to be gained from compression through the target. If JP233 attacks remain necessary in future, they would be better conducted as pairs of aircraft sent to the target at irregular intervals. The support afforded to our missions this far has done little to suppress what has proved to be the greatest threat - that posed by AAA barrage fire. Our preferred option would be to negate the AAA by flying above it at 20,000ft plus. However, at this altitude, 2 way contact with AWAVs would be essential and fighter sweep desirable. In addition, depending upon the en-route and target area SAM threat, EF111 or Wild Weasel support might also be necessary.

ATTACK ON UBAYDAH BIN AL JARRAH AIRFIELD - 20 JAN 91

AIM

1. The aim of the mission was to disrupt enemy air operations at An Natef airfield.

PLAN

2. The task called for aircraft to attack An Natef airfield located 80nm south of Baghdad between 1630Z and 1645Z on 20 Jan 91. The airfield was a DOB and consisted of a main runway, parallel taxiway and revetments at either end of the airfield. Following our review of tactics we decided to load the aircraft with 8 x 1000lb freefall bombs, each with a mix of impact and delay fuzing. The bombs would be delivered from a level attack at 20000ft. The centre of the airfield was designated as the sole DMPI and it was expected that bomb dispersion and marking inaccuracies would ensure a reasonable spread of weapons onto the airfield. The attack direction was constrained to a single LOA because of the presence of a protected religious site 2.5nm north of the target. The mission would be supported by two EF111 Revers and two F14 Tomcat fighters.

TEXT REDACTED

EXECUTION

4. Outbound Transit. All 8 aircraft took off from Muharraaq behind the 2 Victor aircraft tasked to refuel the formation. The transit and AAR was uneventful.

5. Ingress and Egress. Having completed AAR the aircraft climbed to 20000ft to ingress to the target. Both ingress and egress were uneventful. Winds encountered at 20000ft were of the order of 70knots on a bearing of 250o. Such winds, combined with the aircraft having a 30kt IAS speed band in which to fly, made time keeping difficult and emphasized the need for accurate forecasting and careful planning.

6. The Attack. Approaching the target area the lead and No 3

reported that their MGRs were unserviceable. Therefore, the lead formed on the No 2 and the No 3 formed on the No 4, and these aircraft manually released their weapons on call from the No 2 and No 4. The No's 5,6,7 and 8 carried out normal attacks in the fully automatic mode. Airfield defences were quiet until the first bombs impacted. Subsequently a heavy AAA barrage began but it was estimated that the AAA did not reach above 18000ft. No SAM indications or launchers were seen in the target area.

7. Homebound Transit. All the aircraft returned to the tanker towline and refuelled from the Victors prior to transitting home at FL270. The aircraft landed safely at the end of a 3.55 hour sortie.

CONCLUSION

8. All 8 aircraft delivered their weapons onto the target area, including 2 aircraft that would have had to abort the sortie if a low level delivery had been chosen. The accuracy of the attack was difficult to assess since the target was also the point of interest of B52 aircraft shortly after our mission. This, together with the very slow delivery of damage assessment, made it impossible to draw out lessons for subsequent attacks. However, all crews agreed that the medium level option, with support, felt safer than low level overflight of defended targets.

ATTACK ON JALIBAU SOUTH EAST AIRFIELD - 21 JAN 91

AIM

1. The aim of the mission was to disrupt enemy air operations at Jalibau South East airfield.

PLAN

2. The task called for aircraft to attack Jalibau South East airfield which lies some 200nm south east of Baghdad between 1745Z and 1800Z on 21 Jan 91. The target had already been attacked by the Sqn on 18 Jan and heavy AAA had been experienced during that low level attack. Further attacks by other Multi-National Forces aircraft had also been directed against the airfield. In order to remain above the AAA threat, a level attack from 20000ft was planned, with the centre of the HAS sites at either end of the runway selected as the DMPIs. Such widely spaced DMPIs would allow pairs of aircraft to attack them abreast along 2 separate LOAs making deconfliction easier and each pair of aircraft would attack the target at 20 sec intervals. It was planned to have each aircraft loaded with 8 x 1000lb bombs with a mixture of impact and delay prizes. The attacking force was supported by USAF F4G Wild Weasel aircraft and F15 fighters.

TEXT REDACTED

EXECUTION

4. Outbound Transit. All 8 aircraft departed Muharraaq and rendezvoused with VC10 tankers. The outbound transit was uneventful.

5. Ingress and Egress. The ingress to the target were relatively quiet. However No 6 reported that his radar warning receiver was unserviceable and decided to abort the sortie. On egress a number of fighter indications were received by the formation, despite information to the contrary from AWACs. The indications caused 4 crews to jettison their underwing tanks and twin store carriers.

6. The Attack. The 7 aircraft attacked their DMPIs without incident and no airfield defences were active until the first bombs impacted the target. Thereafter a AAA barrage commenced and several unguided SAM launches were seen. Both the AAA and SAM launches were ineffective.

7. Homebound Transit. Since 4 aircraft had jettisoned their underwing tanks and twin store carriers, those aircraft were able to transmit direct to Muharraq. the 3 remaining aircraft rendezvoused with the Victor tankers to carry out AAR prior to transitting home. Upon arriving at Muharraq, a missile attack warning was in progress. The Victor tankers still had spare fuel and set up a towline to enable to Tornados to refuel again and remain airborne until the alert was cancelled. The last aircraft landed after a sortie of 4.20 hours duration.

CONCLUSION

8. Seven aircraft succeeded in delivering their weapons onto the target. Unfortunately damage assessment has not been forthcoming and so it is impossible to draw conclusions as to the attacks effectiveness. Of note, however is the number of apparently spurious warnings of enemy fighters recieved by the formation. Had these spurious warnings been recieved before the attack phase, the effectiveness of the mission would probably have been degraded by over 50%. If such spurious warnings cannot be programmed out of the warning system, confidence in the system could be lost, leading to potentially dangerous complacency.

ATTACK ON TALLIL AIRFIELD - 22 JANUARY 1991

AIM

1. The aim of the sortie was to disrupt enemy air operations at Tallil airfield.

PLAN

2. The task called for aircraft to attack Tallil airfield between 1910Z and 1915Z on 22 Jan 91. The airfield had been the target of numerous attacks by Multi-National Forces, including 2 attacks by Muharraq Tornados. Since previous attacks on this airfield had encountered very heavy AAA fire we decided to attack from 20000ft using 8 x 1000lb freefall bombs with a mix of impact and 12 hour delay fuzing. Two DMPIs were chosen on the main runway, one in the north western quadrant of the airfield, and one in the south eastern quadrant. The other two quadrants were allocated to 8 Tornados from the Dharhan Detachment, who would attack 6 minutes before us and other DMPIs were selected for four F15E aircraft attacking 3 mins before us. Since we were attacking at 20000ft, we decided that compression TOT would not affect the survivability or success of the attack. We therefore opted for a single track routing with aircraft separated laterally by 20 seconds and vertically by 500ft. In addition we planned to have 1 minute separating the No 4 and No 5 aircraft. The attack was supported by an EF111 Raven and two F15 fighters.

TEXT REDACTED

EXECUTION

4. Outbound Transit. Unfortunately the No8 could not get both engines into reheat and had to ground abort the sortie. Shortly after take-off, the No 6 reported that he had fumes in the cockpit and returned to land safely at Muharraq. The 6 remaining aircraft successfully rendezvoused with VC10 tankers and the outbound transit was uneventful.

5. Ingress and Egress. Having completed AAR, the formation climbed to 20000ft to ingress to the target. AWACs reported that the EF111 Ravens would not be on task, but we decided that this would not cause us to abort the sortie. Both ingress and egress routing was uneventful.

6. The Attack. Approximately 40nm from the target AAA fire was seen from the target area. We assumed that this AAA barrage was as a result of the attacks by the Dharhan Tornados and the F15E aircraft. The AAA fire continued throughout our attack but was ineffective. On approaching the target, the No 4 reported a GMR failure and closed on the wing of the No 5 for a reversionary attack. All 6 aircraft successfully delivered their weapons onto the target.

7. Homebound Transit. After leaving Iraqi airspace the formation rendezvoused with the VC10 tankers and carried out AAR. The transit back to Muharraq was uneventful and all 6 aircraft landed safely having been airborne for 3.50hrs.

CONCLUSION

8. Six aircraft succeeded in delivering their weapons onto the target. Subsequent reconnaissance photographs showed that 4 aircraft had delivered their weapons very close to the desired DMPIs causing 8 large craters in the main runways and taxiways. The 2 remaining sticks of bombs had fallen short of the planned DMPIs but had apparently caused some damage to support buildings on the airfield. Overall, the results were satisfactory, given that this was the first medium level weapon delivery by a number of the crews in the formation. None of the crews expressed concern at the lack of electronic jamming support although all agreed that such support, together with fighter cover, was highly desirable.

ATTACK ON AL ZUBAYR OIL PUMPING STATION - 25 JANUARY 1991

AIM

1. The aim of the mission was to destroy the oil pumping station at Al Zubayr.

PLAN

2. The task called for aircraft to attack the oil pumping and storage complex at Al Zubayr, 10nm south west of Basra, between 0240Z and 0245Z on 25 Jan 91. Because the target was located in an area known to be heavily defended by AAA units, we decided to attack at 20000ft using 8 x 1000lb bombs per aircraft. Since bomb ballistics and marking errors would cause a dispersal of bombs over the target a single DMPT was selected in the centre of the complex. The formation would ingress on a 40 sec card formation and attack from two directions with 20 secs separation between each TOT. The most direct routing to and from the target was selected taking the formation up the Persian Gulf, approximately 30nm off the Saudi Arabian and Kuwaiti coastline. The routing meant that AAR would not be required outbound, but tanker support would be required on egress from the target. The attack would be supported by EF111 and F4G SEAD aircraft and F15 fighters.

TEXT REDACTED

EXECUTION

4. Outbound Transit. Just prior to take-off the formation was informed that the EF111 aircraft would not be on task but the formation decided to continue with the sortie. All 8 aircraft got airborne but prior to entering Iraqi airspace the No 4 and 8 reported radar warning receiver failures and returned to Muharraaq.

5. Ingress and Egress. Light AAA fire was seen during the ingress and several unguided missile launches were observed, all of which were ineffective. Heavy AAA fire was experienced

during egress close to the Iraq/Kuwait border. The formation at FL280, deviated to the east of this heavy AAA fire, and then once over the Persian Gulf contained southwards.

6. The Attack. The location of the target in an area covered in oil works and associated infrastructure made offset identification difficult. However, the target proved to be radar discrete and all 6 aircraft successfully released their weapons. A layer of low cloud precluded definitive damage assessment but several crews thought that secondary explosions had occurred. Upon weapon impact, heavy AAA fire commenced but none was assessed to exceed 18000ft.

7. Homebound Transit. Although the Victor tankers were away from the specified datum position, the formation successfully rendezvoused with them. Once AAR was completed the aircraft returned to Muharraq landing after a sortie of 2 hrs duration.

CONCLUSION

8. Six aircraft delivered their weapons onto the target area. However, no damage assessment has yet been received on this target making it difficult to come to any conclusions. Given the ballistic errors inherent in the Tornado at medium level and the small size of the nominated target, it is likely that any direct hits would be by luck rather than design. We feel that the small size of the target required the attentions of PGMs rather than dumb bombs, however accurately aimed.

ATTACK ON TAL AL LAHM AMMUNITIONS DUMP - 26 JANUARY 1991

AIM

1. The aim of the mission was to destroy as much as possible of Tal Al Lahm ammunitions dump.

PLAN

2. The task required aircraft to attack the ammunition dump at Tal Al Lahm which lies 170nm south east of Baghdad between 0200Z and 0215Z on 26 Jan 91. The target covered an area measuring 4nm long and 2nm wide, and consisted of dispersed storage sheds in 2 distinct groups. To the south approximately 190 storage sheds were randomly distributed about the site. To the north approximately 90 storage sheds measuring approximately 350ft by 50ft were arranged in an series of rows covering an area 1.5nm long and 0.75nm wide. Given the small attacking force we decided to concentrate the attack on the northern site and chose 8 evenly spaced DMPIs. Previous flights close to this area had shown that the dump was well defended by AAA batteries, and together with the possible explosive effect of hitting ammunition; we therefore decided that a medium level weapon delivery was necessary. Routing at medium level was confined to a single track with aircraft separated by 20 secs laterally and 500ft vertically and one minute separation between Nos 4 and 5. The attack would also be carried out using this spacing. The formation was to be supported by two EF111 Raven aircraft and four F15 fighters.

TEXT REDACTED

EXECUTION

4. Outbound Transit. On take-off No 4 suffered an engine surge and had to abort the sortie. The remaining 7 aircraft successfully rendezvoused with 2 Victor tankers. The first tanker unfortunately had one hose that was unserviceable forcing the Lead, No 2 and No 3 to refuel from the same wing hose. Upon completion of the first planned refuelling bracket

this hose also became unserviceable, but the formation had received sufficient fuel to complete the task.

5. Ingress and Egress. The ingress and egress were uneventful as far as enemy defences were concerned. However, medium level winds were stronger than forecast necessitating a 30 sec delay to the nominated TOT.

6. The Attack. All 7 aircraft carried out the attack according to the plan. Unfortunately No 6 was unable to release any of his bombs over the target because of a computer fault. The No 6 succeeded in dumping his bombs into the desert some 5 minutes later. Target defences were quiet until bombs impact occurred, but even then the AAA fire was not as intense as had been previously experienced from this area.

7. Homebound Transit. Upon egress the Lead and Nos 5,7 and 8 reported that they had sufficient fuel to return direct to Muharraq. the No2 2,3 and 6 however required AAR and therefore separated from the formation to rendezvous with the single serviceable Victor, prior to transitting back the Muharraq. All 7 aircraft landed safely after a sortie of 3.20hrs.

CONCLUSION

8. Six aircraft succeeded in delivering their weapons into the target area. Subsequent photography of the dump, however showed that while delivery had been accurate, a majority of bombs had impacted between the sheds. Indeed only one of the storage sheds was clearly seen to have been destroyed. Subsequent intelligence reports indicated that 27 sheds had been destroyed, but it is not clear whether this was as a result of our attack or a follow-up attack by other Multi-National Force aircraft. it was disappointing to see such an apparently small amount of damage for the effort involved an observation which highlighted the problems of attacking a well-designed and dispersed ammunitions dump. Further, we do not consider that the more accurate delivery of weapons from low level would have necessarily increased the amount of destruction caused.

ATTACK ON AS SUMAWALI PETROLEUM REFINERY - 28 JANUARY 1991

AIM

1. The aim of the mission was to destroy the As Samawali petroleum refinery.

PLAN

2. The task called for 10 aircraft to attack the As Samawali petroleum refinery which lies approximately 120nm south east of Baghdad, between 0200Z and 0210Z on 28 Jan 91. The refinery consisted of 4 fractionating towers in a north-south row with storage tanks to the west and support buildings to the east. The whole site covered an area 1200ft by 700 ft. We decided because of the explosive nature of the target, that a medium level attack would be most suitable and designated the row of fractionating towers as the aiming point for all aircraft. The 10 aircraft would all follow the same single track route into and out from the target, in 3 separate elements; a pair and two 4-ships. Each element would be separated by one minute and within each element, aircraft would have 500ft of vertical separation. The attack would be supported by two F4G Wild Weasel and two F15 fighters.

TEXT REDACTED

EXECUTION

4. Outbound Transit. All 10 aircraft got airborne from Muharraaq, and proceeded to rendezvous successfully with 3 Victor tankers. The transit was uneventful.

5. Ingress and Egress. Having completed AAR the formation climbed to 20000ft before entering Iraqi airspace. At this altitude the wind speeds were stronger than forecasted and the TOT was delayed by one minute to take account of this. The ingress was uneventful, but on egress a large amount of AAA fire was seen from Tallil airfield, some 25nm north of track. We considered that this may have been due either to a sector

air raid warning, or as a direct response to our attack some 45nm west of the airfield.

6. The Attack. All 10 aircraft attacked the target, but the No 2 mis-identified an aiming offset and his bombs fell approximately 1.5nm to the east of the refinery. As the leaders bombs impacted, a huge explosion occurred and this was followed by more secondary explosions as fires took hold and more bombs were delivered. No AAA was seen in the target area.

7. Homebound Transit. All 10 aircraft had sufficient fuel to return to Muharraaq without AAR and the Victors were informed accordingly. The aircraft all landed safely at Muharraaq after being airborne for approximately 3.00 hrs.

CONCLUSION

8. Nine aircraft were considered to have delivered their weapons at the target. Although no damage assessment has been received from the intelligence network the huge secondary explosion witnessed and airborne reports of fires some days later, lead us to believe the attack was successful.

ATTACK ON AD DIWANIYA PETROLEUM PRODUCTS STORAGE SITE -
29 JANUARY 1991

AIM

1. The aim of the mission was to destroy the petroleum products storage area at Ad Diwaniya.

PLAN

2. The task called for 8 aircraft to attack the petroleum products storage area situated on the western outskirts of Ad Diwaniya some 75nm south east of Baghdad between 2230Z and 2245Z on 29 Jan 91. The storage site measured approximately 1500ft by 900ft and consisted of 6 large storage tanks, 8 small storage tanks and a populated area with support buildings. The orientation of the site lent itself to an easterly attack direction and this also meant the attack would benefit from having a tailwind. Unfortunately, such an attack direction put the town of Diwaniya in the immediate overshoot of the target. We therefore decided to attack on a northerly track, albeit that this would mean that bombs would be delivered into a 60 knot crosswind. Each of the 4 rows of tanks were designated as DMPis and we decided to deliver 8 x 1000lb bombs each from 20000ft. The formation would attack in 20 sec stream, with 500 feet separation between each aircraft. The attack was to be supported by two EF111 Raven aircraft and two F15 fighters.

TEXT REDACTED

EXECUTION

4. Outbound Transit. All 8 aircraft took-off from Muharraaq and rendezvoused with 2 Victor tankers. The transit was uneventful although one Victor had an unserviceable hose.

5. Ingress and Egress. Having left the Victors and climbed to 20000ft it was found necessary to adjust the TOT because the wind speeds were not as forecast. The lead delayed the TOT of the first 4 aircraft by 30 secs and the No 5 delayed the

TOT of the rear 4 aircraft by 1 minute. the ingress and egress were otherwise uneventful although some radar warnings were received by some aircraft. These indications were reported to the intelligence staff during the debrief.

6. The Attack. The first 7 aircraft delivered their weapons onto the target area. Unfortunately the No 8's GMR failed at a late stage and he therefore released his bombs on the computers raw position. No 8's bombs were seen to impact the ground approximately 0.5nm short of the target. The No 4 had an autopilot failure and therefore formatted on the No 3 in order to release his bombs on a call from the No 3. As the leaders bombs impacted secondary explosions and fires were seen in the target area and these continued as more bombs were delivered. The target was apparently undefended, but AAA fire was seen from a military storage area 2nm short of the target. The AAA was ineffective.

7. Homebound Transit. On leaving Iraqi airspace some of the aircraft required AAR and the whole formation transitted home to land after 3.20 hrs.

CONCLUSION

8. Despite 2 aircraft malfunctions 7 aircraft succeeded in delivering weapons into the target area and the secondary explosions and fires led us to believe that the attack had been successful. Photography of the target received 2 days later, showed that only 2 of the large storage tanks and several support buildings had been destroyed. Unfortunately, the damage assessment could not tell us whether the other tanks had been penetrated by weapon fragments or damaged by the secondary explosives and fires. The photography also showed that a large number of bombs had impacted approximately 0.25nm to the west of the target. It would appear from this that the weapon aiming computer is allowing to much wind effect, and emphasises the need to attack with head or tailwinds whenever possible.

ATTACK ON SHAIBAH AIRFIELD - 31 JANUARY 1991

AIM

1. The aim of the mission was to destroy aircraft hangars on Shaibah airfields.

PLAN

2. The task called for aircraft to destroy the hangars in Shaibah airfield which lies 10nm south west of Basra between 1735Z and 1740Z. The hangars were situated in two groups to the south of the runway. One group of 3 hangars was in a line heading east-west and covered an area approximately 1200ft by 400ft whilst the second group of 4 hangars each measuring 100ft by 50ft were arranged in an arc. This second group would require 2 attack directions to ensure adequate coverage and so we decided to attack with 3 aircraft on a northerly track and 3 aircraft on a westerly track. the 2 remaining aircraft would attack the first group of hangars on a westerly track. Previous sorties to this area of Iraq had reported very heavy AAA throughout the region, and so we decided to deliver 8 x 1000lb freefall bombs each, from an altitude of 20000ft. Initially all aircraft would follow a single track northwards from Muharraaq. the 5 aircraft attacking from the east would then split from the formation into their own track. Separation between aircraft would be 500ft vertically and 20 secs laterally, for the route and attack. In addition there would be 1 minute separation between No 3 attacking northwards and No 4 attacking westwards. the attack was part of a USN package consisting of six A6 aircraft tasked to attack aircraft in the open and support facilities at Shaibah, an EA6 electronic jammer, an A6 armed with HARM and four F14 fighters.

TEXT REDACTED

EXECUTION

4. Outbound Transit. All 8 aircraft took-off from Muharraaq and climbed to 20000ft. The transit was uneventful.

5. Ingress and Egress. The route took the formation past Kuwait city and we were surprised to see that no blackout was being enforced by the Iraqis. Whilst the formation were abeam Kuwait City some 10nm off the coastline, a short burst of AAA was seen from a battery to the south of the city, but this did not threaten the formation. As the aircraft approached the target area sporadic AAA fire was seen but none reached the altitude at which we were flying. Numerous fires could be seen in the ground once we had coasted-in. Wind speed at 20000ft again caused timing problems and the Nos 4 to 8 delayed their TOT by one minute. The leader and No 2 attacked on time but the No 3 was unable to keep up and delayed his TOT by 30 secs. the egress was uneventful, the 2 parts of the formation rendezvoused abeam of Kuwait city.

6. The Attack. On approaching the target all the crews were able to identify the DMPIs on the GMR, and deliver their weapons normally. Unfortunately 4 of the leader's bombs were not released by the computer and these were taken back to Muharraaq. AAA fire at the target was sporadic and one unguided missile was seen to be launched. The target defences did not affect the attack.

7. Homebound Transit. None of the aircraft required AAR from the pre-positioned Victor and all the aircraft transitted home to land safely after a 1.50 hr sortie.

CONCLUSION

8. A total of 60 x 1000lb bombs were delivered onto the target area and the confidence of the navigators led us to believe that the delivery had been accurate. However, damage assessment photography later showed that whilst the bombs had been delivered in the correct area, only one hangar had been damaged by the attack. Once again, we considered that much effort had been expended against a small target, for very little gain. Whilst low level delivery may have improved the result, the threat from AAA would, from experience, have posed a considerable danger. The target would have been ideally suited to PGMs and we hope that their arrival in theatre will be sooner rather than later.

ATTACK ON AS SAMAWAH HIGHWAY BRIDGE - 2 FEB 1991

AIM

1. The aim of the mission was to destroy the highway bridge north of As Samawah.

PLAN

2. The task called for 4 aircraft to attack the highway bridge 5nm north of As Samawah which lies 120nm to the south-east of Baghdad, between 1100 Z and 1120 Z on 2 Feb 91. The attack was to be the RAF's first use of LGBs in the war and we decided to attack each end of the bridge with 6 LGBs. In order to allow the maximum flexibility, in case of equipment failure, we decided to attack as 2 pairs of Tornados each flying in a close arrow formation at 20000 ft. Each pair of Tornados would have a dedicated Buccaneer designator aircraft but the separation between the elements would allow a single Buccaneer to designate for all 4 Tornados, if required. The mission was to be supported by four F 15 fighters.

TEXT REDACTED

EXECUTION

4. Outbound Transit. All 6 aircraft, with a spare Buccaneer, got airborne from Muharraaq and proceeded to rendezvous with 2 VC 10 tankers. The AAR trail was hampered by bad weather but the formation was able to proceed into Iraqi airspace. The spare Buccaneer returned to Muharraaq.

5. Ingress and Egress. The ingress and egress were uneventful and the presence, at altitude, of large amounts of cloud meant that a close formation was required for most of the route. All the aircrew reported that they felt very vulnerable in this close formation.

6. The Attack. Fortunately, approximately 50 nm from the target, the medium level cloud disappeared to make ideal conditions for LGB operations. Approaching the target the lead

experienced problems with weapon aiming computer and decided to release his weapons from the wing of the No 2. The first 6 bombs were delivered successfully although only 3 appeared to guide to the target. The second 6 bombs were also delivered successfully and all 6 guided to their DMPI. A small amount of AAA fire was seen to the south of the target but this was ineffective.

ATTACK ON AS SAMAWAH SUSPENSION BRIDGE - 5 FEB 91

AIM

1. The aim of the mission was to destroy the suspension bridge at As Samawah.

PLAN

2. The task called for aircraft to attack the suspension bridge over the Euphrates river, in the centre of As Samawah town, which lies 120nm south-east of Baghdad, between 0500 Z and 0515 Z on 5 Feb 91. The bridge was 160 m long with suspension piers and towers positioned 40 m from the river bank. The aircrew assessed that the best DMPIs to destroy the bridge would be the suspension towers, since we considered that this was where the weight of the bridge was taken. However, the task called for us to attack the bridge abutments and this was confirmed by further advice from CTTD. We therefore targeted a pair of Tornados onto each bridge abutment. Each pair of Tornados would have a dedicated Buccaneer designator aircraft and weapon delivery would be from 20000ft. The attacking elements would be separated by 45 secs in order to allow a single Buccaneer to designate for both pairs of Tornado if this was necessary. Since the target was located in the centre of a town we decided the weapons would not be released unless a positive radio call was received from the Buccaneers, to indicate they had serviceable equipment and had identified the target. We expected this procedure, and an approach along the line of the river, to minimize the chances of collateral damage to the town. The mission was supported by two F 15 fighters and two F 4G Wild Weasels.

TEXT REDACTED

EXECUTION

4. Outbound Transit. All 6 aircraft got airborne from Muharraq behind 2 Victor tankers. The formation caught up with the Victors shortly after coasting-in over Saudi Arabia. The transit was uneventful.

5. Ingress and Egress. Having completed AAR the formation climbed to 20000 ft for the ingress. Both ingress and egress, at 25000 ft, were uneventful.

6. The Attack. The attack was carried out as planned with the first pair of Tornados delivering their weapons onto the southern abutment and the northern abutment being attacked by the second pair of aircraft. All the bombs guided successfully to their DMPIs. Light AAA fire was seen from an area south-west of the target, after the attack, but none reached the attack altitudes.

7. Homebound Transit. Upon leaving Iraqi airspace none of the formation required AAR and all the aircraft recovered safely to Muharraq after a 3.15 sortie.

Conclusion

8. BDA photographs and Pavespike video showed that the weapons had been delivered and guided accurately onto the DMPIs. The bridge sections adjacent to the abutments had been damaged and the bridge was probably unuseable. However the main span of the bridge was still intact and we consider that the wrong DMPIs were tasked for this type of bridge.

ATTACK ON AS SAMAWAH SUSPENSION BRIDGE - 8 FEB 91

AIM

1. The aim of the mission was to destroy the suspension bridge at As Samawah.

PLAN

2. The task called for aircraft to attack the suspension bridge over the Euphrates river, in the centre of As Samawah town which lies 120nm south-east of Baghdad, between 0535 Z and 0550 Z on 8 Feb 91. The bridge had previously been attacked by the Sqn (in fact by the same crews) on 5 Feb, but had only been damaged. We believe that the failure of the first attack had been due to the wrong DMPI's being tasked. We therefore decided to deliver 6 LGB's, from pairs of aircraft, onto the suspension towers of the bridge. The target designation would be provided by 2 Buccaneer aircraft and the attacking elements would be separated by 45 secs. Weapon delivery would be from 20000 ft and the attack would be supported by two F 15 fighters, four F 4G Wild Weasels and three EF-111 jammers.

TEXT REDACTED

EXECUTION

4. Outbound Transit. All 6 aircraft got airborne from Muharraq and proceeded to rendezvous with two Victor tankers. The transit was uneventful.

5. Ingress and Egress. The ingress and egress were uneventful.

6. The Attack. The Lead and No 2 carried out a normal attack and released their weapons successfully. The bombs all guided to the southern suspension tower and detonated normally. Shortly after commencing the turn onto the escape heading it became apparent to the leader that the bridge had been totally destroyed. The observation came, however, too late to prevent the release of the rear elements bombs. The Nos 3 and

4 released their weapons normally. Unfortunately, only 3 of the second elements bombs guided, the other 3 fell short of the town.

7. Homebound Transit. All the aircraft recovered to Muharraq after a 3.20 hr sortie.

Conclusion

8. The attack was completely successful, 6 bombs totally destroying the bridge. The attack confirmed the importance of correctly identifying the weak part of the structure, and concentrating the attack on that spot.

ATTACK ON AL FALLUJAH RAILWAY BRIDGE - 13 FEB 91

AIM

1. The aim of the mission was to destroy the rail bridge at Al Fallujah.

PLAN

2. The task called for 4 aircraft to attack the rail bridge 3nm west of Al Fallujah which lies 40nm to the west of Baghdad, between 0540 Z and 0610 Z on 13 Feb. The bridge had previously been attacked by the Sqn on 10 Feb but the mission had failed to achieve the aims. We decided to attack with 2 pairs of Tornados delivering LGBs to each end of the bridge. The bombs would be guided to their DMPIs by 2 Buccaneer designators, one for each pair of Tornados. The attack would be supported by EF-111 jammers, F 4G Wild Weasels and F 15 fighters.

TEXT REDACTED

EXECUTION

4. Outbound Transit. All the aircraft took-off from Muharraaq and procee3ded to rendezvous with 2 VC 10 tankers. The transit was uneventful.

5. Ingress and Egress. Each ingress and egress was uneventful.

6. The Attack. The attack proceeded as planned and the first pair of Tornados released their weapons successfully. Unfortunately, the Pavespikes designator pod of the first Buccaneer failed approximately 10 secs before bombs impact and the bombs fell short of the target, onto open ground. The second pair of Tornados released their weapons as planned and 5 of these bombs succeeded in hitting the bridge. The sixth bomb failed to deploy its tail unit and fell well short of the target.

7. Homebound Transit. The homebound transit was uneventful and all aircraft landed safely having been airborne for 4.00 hrs.

Conclusion

8. The bombs that struck the bridge did not destroy it but produced damage that, we assess, would render the rail bridge unusable. Of note on this sortie, was the lack of enemy air defence activity in an area which had previously been marked by heavy SAM activity.

Basic Decode of Jaguar MISREP Format

UPDATED BY *Name of Headquarters and Date Time Group (DTG)*

(note: JFAO was the HQ of the UK's Joint Force Air Operations)

***** Offensive Strike Mission Report *****

MUHZ *(4-letter airfield designator for Muharraq)* MISREP

MSNNO: *Mission Number assigned to this formation/sortie.*

A. TGT: *Target location, descriptor and number of aircraft tasked to attack it.*

B. TOT: *Time on target (all times in ZULU time).*

C. RESULT: *Aircrew's assessment of the results of the attack by this formation, for example, the number of weapons dropped. Initial assessment would have been made via visual and/or image recording devices, eg, aircraft Head Up Display.*

D1. TGT OBSERVATION: *Anything noteworthy observed in the vicinity of the target, for example, the presence of surface-to-air fire by its defenders.*

D2. ENROUTE OBSERVATION: *As per D1 but for the transit to/from the target area.*

D3. TARWI: *Target Weather Information. A report on the weather encountered in the target area. The digits relate to specific ASMA codes, the details of which are unavailable.*

E. RMKS. *Any additional noteworthy remarks, for example, problems with the aircraft systems or potential conflictions with other Allied formations during the mission (this is the closest the Jaguar MISREPs get to a narrative style).*

BROADCAST: *Routine messages for the rest of the RAF community operating on ASMA, for example, a change in the status of the ASMA system.*

ATTENTION: *Important messages for the rest of the RAF community operating on ASMA, for example, the status of surface-to-surface missile attacks on Allied airfields, or identifying other ASMA tote pages which RAF forces should review.*

VDU ID: *Identification number of the ASMA terminal sending this report and DTG it was sent.*

UPDATED BY JFAO ON 19JAN91 AT 08:16 *** OS MISREP *** TOTE JFA013 PAGE 11

MUHZ MISREP

MSNNO: 4401J

A. TGT: 3 AC ON 2848.15N 04802.40E SA2 SITE. 4 AC ON 2 OTHER SA2 SITES IN VIC

B. TOT: 190505 Z

C. RESULT: ALL AC SCORED HITS ON TGTS. DAMAGE TO ALL SITES,
PROBABLY CONSIDERABLE.

APPROX LOCATION OF OTHER 2 SA2 SITES:

1. 2850N 4805E 2. 2851N 4807E

D1. TGT OBSERVATION: 1. AAA ON FRAGGED TGT. CONFIRMED BY HUD VIDEO. 2. AAA
AT 2850N 0481E, 2844N.

D2. ENROUTE OBSERVATION:

D3: TARWI: 8881X

E. RMKS: DETCO COMMENTS. ALL 8 AC FLEW IN PRS TRAIL, IN CLOUD FOR 40 MINS
TO TGT AREA AND BROKE CLOUD AT 15000 FT WITH 1 MIN TO TGT. TGT POSITIVELY
ID AND AC ATTACKED IN 30 DEG DIVE DOWN TO 6000 FT DESPITE HEAVY AAA COMING
UP FROM TGT. LEAD AC BOMBS HUNG UP. REMAINING 7 AC SCORED DIRECT HITS ON
3 SA2 SITES. ALL CONFIRMED BY FILM. ALL RETURNED SAFELY. NO BATTLE DAMAGE.
ONE EXPERIENCED PILOT DESCRIBED IT AS THE MOST DIFFICULT SORTIE HE HAS
EVER FLOWN.

BROADCAST: ASMA BACK ON LINE 1950Z 16TH JAN 1991 DISPLAY MODE CONTINUED

ATTENTION: SCUD ----- ALL CLEAR ALL CLEAR ALL CLEAR. FROM: JFAO QUEUE: 42

VDU ID: V900

TIME: 190816Z

UPDATED BY MUHZ ON 25JAN91 AT 08:22 *** OS MISREP *** TOTE JFA013 PAGE 31

MUHZ MISREP

MSNNO: 4401A

A. TGT: 1. 2852.00N 04807.00E M46 ARTY. 2. 2853.00N 04803.00E M46 ARTY.

B. TOT: 250615 Z

C. RESULT: LDR WEATHER ABORT. B - D DIVED THROUGH GAP. NO POS ID - NIL
DROP. E - G WEATHER ABORT. HOTEL DIVED THROUGH GAP IN TGT 2 AREA -
POS ID ON MIL POSNS. DROPPED 4 BOMBS. NO ASSESSMENT.

D1. TGT OBSERVATION: NIL AAA. DELTA HAD RAPIER LAUNCH INDICATION AND CWE AT
2837.00N 04815.00E.

D2. ENROUTE OBSERVATION: NIL

D3: TARWI: 7890Z

E. RMKS. 1. LDRS COMMENTS. EXT CLOUD COVER S KUWAIT UP TO 15000 FT
WITH ISOL-ATED CB UP TO 22000FT PRECLUDED TGT ID AND ATTACK.
ISOLATED SMALL HOLES IN CLOUD COVER WERE USED IN AN ATTEMPT TO GET
THROUGH TO THE TGT. NOT POSSIBLE TO POS ID MIL TGTS IN ALL CASES
BAR ONE.

BROADCAST: DISPLAY MODE CONTINUED
ATTENTION: SEE/ACK JHQD82.30, SER 057 FOR DEP AIR CDR FROM: JHQD QUEUE: 15
VDU ID: V861 TIME: 250827Z

UPDATED BY MUHZ ON 29JAN91 AT 15:01 *** OS MISREP *** TOTE JFA013 PAGE 63

MUHZ MISREP

MSNNO: 4403A

A. TGT: 13 FMB AT 48 51N 48 20E HEADING SOUTH
B. TOT: 301150 Z
C. RESULT: WPNS EXPENDED 76 X CRV7 ROCKETS AND
D1. TGT OBSERVATION: FIRED ON BY ACCURATE AAA AND A SUSPECTED IR SAM BOTH
WERE SUCC NEGATED. NO RWR INDICATIONS.
D2. ENROUTE OBSERVATION: NILL

D3: TARWI: 0081Z
E. RMKS. NO. FLOWN 2 NO. PLANNED 2

WPN LOAD CRV7

RMKS. LDR REMK: ON SUCAP, WORKING WITH PB, FMB'S DECLARED HOSTILE BY US
NAVY. AC WENT TO VID BOATS AND WERE FIRED ON BY AAA. AC INFO PB (USN CON)
WHO CLEARED AC TO ENGAGE.

DETCO COMMENTS: TWO SUCCESSFUL WEAPON PASSES PER AC, 1 POSSIBLY 4 BOATS
HIT OVERALL A SUCCESSFUL SORTIE ON A SIGNIFICANT TGT.

BROADCAST: DISPLAY MODE CONTINUED
ATTENTION: SEE JFA013.63 FOR SUCAP MISREP FROM: JHQB QUEUE: 01
VDU ID: V865 TIME: 291512Z

UPDATED BY MUHZ ON 30JAN91 AT 08:56 *** OS MISREP *** TOTE JFA013 PAGE 65

MUHZ MISREP

MSNNO: 4401A

A. TGT: 2M1726. 2S1 ARTY BN. 2858.25N 04748.00E AND 2858.01N 04749.05E.

B. TOT: 300630 Z

C. RESULT: WPNS EXPENDED 15 CBU87.

RESULT FIRST 4 AC, 3 BOMBS ONTO 1ST DMPI AND 4 ONTO 2ND DMPI. SECOND 4 AC, 4 BOMBS ONTO EACH DMI.

D1. TGT OBSERVATION: NIL AAA NIL SAM. NIL BDA POSSIBLE DUE TO VIS AND CLOUD.

D2. ENROUTE OBSERVATION: NIL

D3: TARWI: 3884Z

E. RMKS. NO. FLOWN 08 NO. PLANNED 08

WPN LOAD CCU2

RMKS. 1. LDR. SORTIE PLANNED WITH 4 AC AGAINST EACH PLANNED DMPI. VIS

WAS POOR DUE TO HAZE WITH 3 OR 4 EIGHTHS OF CLOUD, WITH TOPS AT 13000 FT,

WHICH MADE TGT ACQUISITION DIFFICULT. ALL AC DROPPED LESS 1 HANG UP

WHICH COULD NOT BE RELEASED ON ALT TGT, DUE TO WEATHER. NO SAM OR

AAA SEEN.

BROADCAST:

DISPLAY MODE CONTINUED

ATTENTION: SEE JFA013.65 FOR JAG MISREP

FROM: JHQB QUEUE: 01

VDU ID: V865

TIME: 300856Z

UPDATED BY MUHZ ON 30JAN91 AT 14:12 *** OS MISREP *** TOTE JFA013 PAGE 71

MUHZ MISREP

MSNNO: 4402A

A. TGT: 29 50 00N 048 32 00E POLNOCRNY ON FIRE

B. TOT: 301150 Z

C. RESULT: WPNS EXPENDED 76 X CRV7 ROCKETS AND 480 RDS OF 30MM HE/API.
ON RESULT ARR SHIP ABLAZE AMIDSHIPS. ON DEP WAS ON FIRE END TO END.

D1. TGT OBSERVATION: LIFERAFT 1NM NORTH EAST OF SHIP. UNPROPELLED, ORANGE
WITH HOOD. NO IDEA OF HOW MANY SURVIVORS.

D2. ENROUTE OBSERVATION: TANKER AGROUND AND ON FIRE AT 29 38 00N 048 50 00E.

D3: TARWI: 7863DX

E. RMKS. NO. FLOWN 2 NO. PLANNED 2

WPN LOAD CRV7 PLUS 30 MM HE/API.

RMKS. LEADER. REFUELED ON PULLER. HEADED FOR CAP 60. ENROUTE VECTORED 340DEG/90NM FROM 6D, 29 40 00N 048 00 00E, AND TOLD TO LOOK FOR SURFACE CONTACTS. INITIALLY FOUND THE TANKER DETAILED IN D2. ALSO ASKED TO VID MARITIME PTL AC, IDENTIFIED AS A FRIENDLY P3 ORION. FOUND HELIO AND POS ID AT 29 50 00N 048 50E HDN NW BACK TO PULLER. OFF PULLER RECONTACTED PB. IMMEDIATELY VECTORED TO W1 NORTH, TO 29 55 00N 048 55 00E. TOLD TO SEARCH WEST FOR TGTs AND OR BDA. HAVING FOUND A POLNOCHNY, REP'TD IT, AWAITED CLEARANCE TO ATTACK. CLEARANCE FROM PB RECD AFTER ABOUT 4MIN, INITIAL RECCE PASS TO CONFIRM HOSTILE TGT FOLLOWED BY 2 ROCKET PASSES, FOUR STRAFE PASSES. ALL STRAFE PASSES AND ONE ROCKET PASS HIT SHIP THEN ON FIRE END TO END. NOTICED LIFERAFT TWO THIRDS OF THE WAY THROUGH ATTACK AND THEREFOR ASSUMED SHIP ABANDONED. NO AAA SEEN FROM SHIPS DEFENCES.

DET COMMANDERS COMMENTS:

BROADCAST:

DISPLAY MODE CONTINUED

ATTENTION: GRANBY WARNING TEST 301230Z

FROM: WARN QUEUE: 09

VDU ID: V864

TIME: 301421Z

UPDATED BY MUHZ ON 31JAN91 AT 11:30 *** OS MISREP *** TOTE JFA013 PAGE 77

MUHZ MISREP

MSNNO: 4402A

A. TGT: ZSU23-4 AND SSVs 2847.00N 04816.00E.

B. TOT: 311005 Z

C. RESULT: WPNS EXPENDED 8 CBU BL755

RESULT 1 ZSU23-4 AND 1xSSV(TRUCK) DESTROYED.

D1. TGT OBSERVATION: TGT ON MAIN NORTH/SOUTH HIGHWAY. IR SAM FIRED, WITH WHITE PLUME FROM EAST OF ROAD IN RAS AL QUALAYAH.

D2. ENROUTE OBSERVATION: NIL

D3: TARWI: 0081X

E. RMKS. NO. FLOWN 02 NO. PLANNED 02

WPN LOAD CC4

RMKS. 1. LDR. INITIALLY TASKED ON SUCAP. ON CHECKING IN WITH PB WAS IMMEDIATELY RETASKED TO BEAR 601 ON BAI. HE PASSED LAT/LONG AND TGT DESCRIPTION. RECCED ROAD LOOKING FOR CONCENTRATIONS OF ARMOUR. SAW STATIONARY VEH ON SIDE OF ROAD. INITIAL ID AS APC, SUBSEQUENTLY ID AS ZSU23-4. ATTACKED AND MANAGED TO COMBINE POSN OF A TRUCK AND ZSU23-4 AT

MOMENT OF RELEASE. NO AAA SEEN ALTHOUGH HAND HELD SAM FORCED A MSL BREAK ON RECOVERING FROM TGT. WEATHER HAZY.

2. NO VIS ID ON No2 WPNS.

3. DETCO COMMENT. SUCCESSFUL SORTIE BY 2 AC. FIRST USE OF BL755 ON FIRST ZSU23-4 FOUND BY MUHZ. FOLLOWING ATTACK MISSILE FIRED AT LEAD AC, LDR EVADED AND JETTISONED REMAINING STORES.

BROADCAST:

DISPLAY MODE CONTINUED

ATTENTION: SEE MY T11.42 THANKS

FROM: JFME QUEUE: 21

VDU ID: V864

TIME: 311149Z

UPDATED BY MUHZ ON 02FEB91 AT 12:42 *** OS MISREP *** TOTE JFA013 PAGE 67

MUHZ MISREP

MSNNO: 4402A

A. TGT: CAP 6D INITIALLY. THEN FAYLAYKAH IS 2927.00N 04817.00E. AAA SITE

B. TOT: 021040 Z

C. RESULT: WPNS EXPENDED 8 x 1000 LB WITH 152 AIRBURST FUZES.

RESULT LDRS BOMBS SEEN TO IMPACT DIRECTLY OVERHEAD OF 6 GUN
EMPLACEMENTS. No2. BOMBS SEEN TO IMPACT ADJACENT TO
CONCRETE PIERS ON COAST WITH PROBABLE AAA POSNS.

D1. TGT OBSERVATION: NIL AAA BURSTS SEEN BUT PB BRIEFED MSN TO EXPECT HEAVY AAA UP TO 12000FT. ALSO WARNED OF VERY HEAVY LOW LEVEL LIGHT AAA UP TO 5000FT.

D2. ENROUTE OBSERVATION: NIL

D3: TARWI: 0081X

E. RMKS: NO. FLOWN 02 NO. PLANNED 02

WPN LOAD CB4

RMKS. 1. LDR. INITIAL ACTION WAS TO GO TO CAP 6D.

VECTORED BY PB TOWARDS FAYLAYKAH. HELD STATION UNTIL MIN FUEL AND THEN RETURNED TO PULLER TO AAR WITH TKR. ON COMPLETION VECTORED BY PB TO FAYLAYKAH AND INSTRUCTED TO CALL BERRY 601 ON FAD 8 FOR TGT DETAILS AND CONTROL. BERRY 601 REQUESTED SUPPRESSION ON EN AD ON SW FAYLAYKAH IS WHILE A6 AC MADE LOW LEVEL RECCE PASS TO SEARCH FOR SURIVORS IN WATER. VISUAL AND RADIO CONTACT ESTAB WITH AC AND A COORD RUN WAS MADE FROM N TO S EGRESSING TO SE. A6 EGRESSSED SAFELY.

E2. DETCO. SUCCESSFUL SORTIE BY 2 AC ON A VERY HEAVILY DEFENDED TGT. BOMBING COMPLETED FROM 12000 FT IN MANUAL AFTER RELEASE FAILED AT 15000 FT.

BROADCAST:

DISPLAY MODE CONTINUED

ATTENTION:

FROM: QUEUE:

VDU ID: V864

TIME: 021406Z

UPDATED BY MUHZ ON 02FEB91 AT 14:40 *** OS MISREP *** TOTE JFA013 PAGE 71

MUHZ MISREP

MSNNO: 4404A

A. TGT: SILK WORM SITE 29 11 87N 048 06 73E

B. TOT: 021230 Z

C. RESULT: WPNS EXPENDED 8 X 1000LB AIRBURST & 4 X CBU 87.

RESULT NO4 DH ON DMPI WITH 2 X CBU 87. THE OTHER 3 MISSED THE
DMPI DUE TO A COMBINATION OF WEATHER AND OTHER FRIENDLY AC IN TGT
AREA.

D1. TGT OBSERVATION: NOTHING CONFIRMED AT DMPI. HEAVY AAA BURST WIGHT
12,000FT NO SAM SEEN.

D2. ENROUTE OBSERVATION: MANY AC IN AREA MAKING SICCCESSFUL ATTACKS VERY DIFF.
ADDITIONALY THERE WERE BOMBS EXPLODING AROUND ROUTE INTO TGT.

D3: TARWI: 6483YB

E. RMKS. NO. FLOWN 5 NO. PLANNED 5

WPN LOAD 8 X 1000LB AIRBURST 4 X CBU87.

RMKS. LEADERS COMMENTS. F 16 IN TGT AREA AT TOT CAUSED LOSS OF MISSION
EFFECTIVENESS. MARGINAL WEATHER COMBINED WITH FRIENDLY AC CONFLICTION IN
TGT AREA MENT ONLY ONE AC ACHIEVED THE AIM. ALL BOMBS NOT ON DMPI FELL IN
SEA. DETCO COMMETS. 5 AC RTB. RECCE AC UNABLE TO GAIN USEFULL PHOTOS.
LOROP MSN NEED FURTHER CONSIDERATION BEFORE FUTURE TASKING. VERY HEAVY AAA
CONSIDERABLE FRIENDLY AC ACTIVITY IN THE TGT AREA MADE THE ATTACK VERY
DIFFICULT TO COMPLETE.

BROADCAST:

DISPLAY MODE CONTINUED

ATTENTION:

FROM: QUEUE:

VDU ID: V864

TIME: 021637Z

UPDATED BY MUHZ ON 08FEB91 AT 09:04 *** OS MISREP *** TOTE JFA013 PAGE 61

MSN No: 4401A

A. TGT: 2M2803, 59-1 ARTY BN. 2857.35N 04804.00E.

B. TOT: 080734 Z

C. RESULT: WPNS EXPENDED 16x1000LB. 8x947 FUZES. 8x952 FUZES.
RESULT ALL AC HIT IN DMPI AND ADJACENT ARTY POSNS. ALL HITS
VERIFIED BY HUD VIDEO. ARTY REVETMENTS WHERE OCCUPIED. 3 AC
DROPPED ON FRAGGED DMPI. No3 ON TO ARTY POSN 1 KM ENE.

D1. TGT OBSERVATION: NIL AAA/SAM. MANY TRENCHES AND REVETMENTS (ALL APPEARED
OCCUPIED) IN AREA.

D2. ENROUTE OBSERVATION: SEE EW MISREP. COMMS DIFFICULT ENROUTE WITH
ABCCC(E)ALLEYCAT. NO INFLIGHTREP PASSED DUE TO NIL COMMS WITH ALLEYCAT ON RTB.

D3: TARWI: 0081X

E. RMKS. No FLOWN 04 No PLANNED 04 WPNS LOAD CB4
RMKS. 1. LDR. GOOD INT FROM THEATRE SOURCES RESULTED IN A MOST
SUCCESSFUL MSN WITH GOOD HITS ON BOTH DMPIs.

BROADCAST: DISPLAY MODE CONTINUED
ATTENTION: GRANBY RED SECTOR EAST SRBM 072258Z FROM: WARN QUEUE: 20
VDU ID: V864 TIME: 080913Z

UPDATED BY MUHZ ON 14FEB91 AT 09:15 *** OS MISREP *** TOTE JFA013 PAGE 17
MUHZ MISREP

MSNNO: 4405A

A. TGT: ARTY BN. 2858.25N 04746.70E AND ARTY CP 2819.30N 04748.72E.
B. TOT: 140742 Z
C. RESULT: WPNS EXPENDED 8xCBU87.
RESULT ATTACKED 1ST TGT. ALL BOMBS LANDED ON DMPI. SECONDARY
EXPLOSIONS FROM BATTERY COMMAND POST JUST BEHIND GUNS.

D1. TGT OBSERVATION: NIL

D2. ENROUTE OBSERVATION: DURING EGRESS TO SOUTH SA2 AND SA6 EMISSIONS. SEE
EW MISREP JFA043.67. GOOD COMMS THROUGHOUT.

D3: TARWI: 0081X

E. RMKS: NO. FLOWN 04 NO. PLANNED 04
WPN LOAD CCU2

RMKS. 1. A VERY SUCCESSFUL SORTIE FLOWN IN GOOD WX. THIS SORTIE PROVED
THE VALUE OF GOOD INT AND INCREASING FAMILIARITY WITH AIMING
THE CBU87 SHOWED THAT RESULTS ARE RAPIDLY IMPROVING. BEST
SORTIE FOR THIS CONSTITUED 4 SHIP SO FAR.
2. DETCO. FIRST CLASS SORTIE.

BROADCAST: DISPLAY MODE CONTINUED
ATTENTION: FROM: QUEUE:
VDU ID: V899 TIME: 141041Z

UPDATED BY MUHZ ON 15FEB91 AT 09:59 *** OS MISREP *** TOTE JFA013 PAGE 25
MUHZ MISREP

MSNNO: 4405A

- A. TGT: 2M0705V. MRL BTY 2853.58N 04808.95E.
B. TOT: 150748 Z
C. RESULT: WPNS EXPENDED 8xCBU87.
RESULT LDR AND No2 HITS ON ARTY AT 2854.84N 04758.19E, ADJACENT
TO ASTROS MRL BTY. No3 MISSED 200M SHORT ON FRAGGED
DMPI, TO NE.No4 TASKED ON FRAG DMP1 AGAINST CP. CP ON
FIRE, THEREFORE SWITCHED TO THE ARTY. NO IMPACT SEEN.
D1. TGT OBSERVATION: NIL AAA, NIL SAM. Nos 3 AND 4 SAW 12 IMPACTS FROM FROM 3
SEPARATE AC ON SAME TGT IN SAME TOT BRACKET. CFMD AS F16s.
D2. ENROUTE OBSERVATION: NIL
D3: TARWI: 0081X
E. RMKS: NO. FLOWN 4 NO. PLANNED 4
WPN LOAD CCU2
RMKS. 1. No4 BELIEVES THAT HIS BOMBS DID NOT EXPLODE.
2. PLEASE ENSURE THAT ALL PLAYERS STICK TO TOT BRACKET. WEATHER
EXCELLENT, LEADING TO EXCELLENT TGT ACQUISITION.

BROADCAST: DISPLAY MODE CONTINUED
ATTENTION: PA HEADLINES JHQP35.L FROM: JHQP QUEUE: 09
VDU ID: V899 TIME: 151003Z

UPDATED BY MUHZ ON 23FEB91 AT 14:04 *** OS MISREP *** TOTE JFA013 PAGE 92
Msn No 4401B

- A. TGT: IU2307Z, 2917.93N 04651.98
B. TOT: 231210 Z
C. RESULT: WPNS EXPENDED 4 X CBU87 AND 4 PODS OF CRV7
RESULT NO1 MISS DUE TO KIT ERROR. NO2 HIT ON ARTY BOSN NEAR
DMPI. NO3 & 4 HIT ON ARTY POSN. PLANNED DMPI.

D1. TGT OBSERVATION: DMPI (BM21 BTY) FOR 1,2,3 APPEARED TO HJAVE BEEN HIT PREVIOUSLY. NO4 TGTED AGAINST TOWED ARTY IN SAME AREA, HIT WITH CRV7

D2. ENROUTE OBSERVATION: NIL

D3: TARWI: 0081X

E. RMKS: No FLOWN 04 No PLANNED 04 WPNS LOAD CCU2, CV2
RMKS FIRST USE OF CRV7 NEW SOFTWARE VERY SUCCESSFUL. ALL ROCKETS HIT
SELECTED TGT AND WHITE SMOKE SEEN FROM TGT POST IMPACT.

DETCO COMMENTS:

BROADCAST: ALL USERS-BRAMPTON GPTN SWITCH BACK UP DISPLAY MODE CONTINUED
ATTENTION: JFAO45 NOW MUHZ EW MISREP,SEE 43 FOR TABZ/DHAZ FROM: JFAO QUEUE:01
VDU ID: V899 TIME: 231411Z

The Royal Air Force and the First Gulf War, 1990-91: A Case Study in the Identification and Implementation of Air Power Lessons

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By Dr Sebastian Ritchie

Historians have long puzzled over the consistent failure of military organisations to learn from the lessons of past conflicts. An apparent tendency to repeat decisive errors may be identified throughout military history and this has generated substantial literature, as well as many different explanations for the military's inability to profit from past experience. Analytical approaches have varied from 'micro' surveys of different campaigns and periods of history to 'micro' investigations of specific conflicts or operations. However, the results have too often been based on theory rather than detailed consideration of the processes by which lessons are – or are not – implemented, and there has been little historical interest in the military's record in more recent conflicts.

This essay seeks to address this gap in the historiography of military lessons by focusing on a modern armed service – the Royal Air Force – and a relatively recent conflict – the first Gulf War. It describes the RAF's experiences in the Gulf War, the lessons process subsequently initiated, and the various factors that determined whether or not specific identified lessons were acted upon.

Introduction

Historians and other analysts have spilled rivers of ink on the apparent failure of military organisations to exploit the lessons of past conflicts and operations. It is often alleged that learning does not come naturally to the military, that they have a regrettable propensity to repeat past mistakes, and that, all too frequently, this trait more than any other has been responsible for failure or even outright defeat. Investigating what they term 'the anatomy of failure in war', Eliot Cohen and John Gooch singled out a failure to learn as one of the three principal sources of military misfortune. They also concluded: 'One of the most obvious ways to improve performance is by learning.'¹

The UK defence community has devoted considerable effort to the improvement of lessons processes over recent years, but the shift in nomenclature from 'lessons learned' to 'lessons identified' has at the same time openly acknowledged that lessons exploitation may be far from straightforward. Yet it is often extremely difficult to pin down exactly why this should be, and many historians, although happy to blame military misfortune on a failure to learn, have been unable to explain this failure convincingly. The most common type of explanation highlights the role of 'guilty men', suggesting excessive conservatism and resistance to change on the part of particular individuals, groups or organisations. A variation on this theme, less overtly critical via the use of deliberately vague modern parlance, involves the assertion that organisations lack a 'culture of learning'.² However, while such allegations are easily made, they can often be far more difficult to substantiate with any reasonable degree of objectivity.

Individual case studies provide one useful means of addressing the problem but, while many have been conducted, surprisingly few have examined the lessons process in the specific context of the air environment. More work in this area would appear desirable, not least to test the common perception that air forces are not, as a rule, inclined to learn lessons from past events, but prefer instead to seek solutions to their problems through the acquisition of ever more advanced technology that tends to promise more than it can deliver. With this requirement in mind, this paper considers lessons exploitation by the RAF following the first Gulf War, an event that appeared all the more worthy of attention as it marked the dawn of the post-Cold War era and inaugurated a veritable revolution in military affairs with particularly far-reaching consequences for the application of air power. After a broad survey of the RAF's role and experiences in the conflict, focusing particularly on air combat, the aim is to highlight the main lessons identified in its aftermath, before assessing the progress of implementation in subsequent years, and finally offering some concluding observations.

In the winter of 1989 and the spring of 1990, world affairs were dominated by the collapse of the Warsaw Pact and the end of the Cold War. Statesmen across the globe heralded a new era of peace, and there was a headlong scramble to collect the so-called peace dividend - substantial savings in public expenditure based on defence cuts. The RAF and the other UK Armed Services nervously waited for the axe to fall. Then, without any warning, it was committed to its largest operation since the Suez crisis - the First Gulf War, known in the UK as

Operation Granby. Ultimately, the RAF's deployed force in the Gulf would number 157 aircraft, including 49 Tornado GR-1s, 12 Jaguars, 18 Tornado F-3 fighters, Nimrod maritime reconnaissance and intelligence collection platforms, Hercules transports, tankers and support helicopters. During the Desert Storm phase of the operation alone, they flew 6,108 sorties; in the Gulf operation as a whole, they flew many more. The RAF also deployed two RAF Regiment Wing Headquarters, two surface-to-air missile Squadrons and four Light Armoured Squadrons and Field Squadrons; the number of deployed RAF personnel totalled around 7,000 at peak.³

Yet Granby was inevitably very different from the type of operation that the RAF had been preparing to conduct in the later years of the Cold War, and it was accompanied by a multiplicity of challenges. The conflict raised serious questions about the utility of the RAF's basic offensive doctrine, a number of its most modern aircraft and several aircrew were lost in combat, and there were many other problems relating to equipment, weaponry and tactics that sometimes impacted upon its contribution within the US-led coalition.

Following the UK's withdrawal from empire, RAF training and equipment was overwhelmingly shaped by the perceived demands of a conflict with the Warsaw Pact on the Central Front. The various air combat platforms illustrate this point most clearly. The Tornado F-3 fighter was, for example, intended to fulfil the highly specialised role of low-to-medium altitude interception of Soviet long-range bombers flying missions against the UK through the Greenland-Iceland-UK gap. It was never viewed as a dogfighter, capable of matching contemporary Warsaw Pact fighters, and the F-3's performance and manoeuvrability at higher altitudes were poor. Moreover, its relative inferiority in air-to-air combat was rendered all the more pronounced at the end of the 1980s by the emergence of advanced Soviet fighters like the MiG 29. Additionally, as the F-3 was expected to operate in the UK Air Defence Region, its self-defence capability was limited; it was not well equipped to fly missions within enemy airspace - a feature that it shared with most other types of aircraft in the RAF at that time.

The two attack platforms deployed to the Gulf, the Tornado GR-1 and the Jaguar, had similarly been developed to fulfil the demands of NATO-area operations. The strength and sophistication of Warsaw Pact air defences had persuaded the RAF that medium or higher-altitude flying over Eastern Europe would be hazardous in the extreme. It seemed that offensive missions would stand a better chance of penetrating hostile airspace at very low levels, exploiting speed and terrain to impede detection and interception. Attack aircraft were therefore optimised for low-level flying and performed less effectively at higher altitudes, and they were largely equipped with weapons designed for low-level release, normally during direct over-flight of the target. Self-defence suites were likewise optimised for lower-altitude flying, and aircrew training was predominantly geared to low-level operations.

Beyond this, the F-3 and GR-1 were technically sophisticated platforms that made significant logistical and maintenance demands. These could be fulfilled without difficulty at their main operating bases in the UK and northwest Europe, but no deployed out-of-area role was

envisaged for either aircraft in 1990, and there had consequently been few preparations to address the logistical challenges involved. The Jaguar - an older and simpler aircraft - had a dedicated overseas role, for which it was very much better prepared, but in the majority of other respects it lacked the Tornado GR-1's operational capability.⁴

The initial deployment phase of the Gulf operation had the objective of establishing a defensive line to protect Saudi Arabia. If Iraqi forces crossed the frontier, they would initiate hostilities with coalition forces. It would ultimately transpire that they had no short-term plans to advance further south in August 1990, but their intentions were unclear at the time and, in the absence of any response from Western countries, Saddam Hussein might well have been tempted to threaten other Gulf States. It thus appeared essential to deploy forces to the Gulf immediately. As it was deemed that such forces should be defensive in character, the first RAF aircraft sent to the Gulf were Tornado F-3s, which had been on exercise in Cyprus at the beginning of the crisis. They were dispatched to Dhahran, Saudi Arabia, on 11 August 1990, and, after five days of theatre-familiarisation flying, mounted their first operational combat air patrols on the 17th.⁵

They were soon joined in theatre by a number of other force elements, including a detachment of Jaguars. Although the RAF would have preferred to send the Tornado GR-1 to the Gulf, the Jaguar force's declared mobile role ensured that it was far better prepared for rapid out-of-area deployment. However, the Jaguar detachment was positioned in Oman, well to the south of the potential area of operations, for its role was primarily symbolic: it was intended to bolster Arab support for the nascent US-led coalition. There were no plans to fight from bases in Oman.⁶

These first deployments, added, of course, to the movement of American forces to the Gulf on a very much larger scale, secured their primary objectives by quickly drawing what was termed a 'line in the sand'. It is true that the RAF's combat capability in theatre was at first limited. The F-3s initially deployed were later described by their detachment commander as 'blatantly below the minimum requirement' and 'manifestly non-operational',⁷ while the Jaguars were based too far away from the potential battle area, and were by no means the most capable offensive platforms in the RAF's inventory. But such considerations were at first less important than the basic fact that a coalition presence had been established in the Gulf only days after Iraqi troops entered Kuwait.⁸

Between the end of August 1990 and the start of Operation Desert Storm on 16 January 1991, the RAF's presence in the Gulf was substantially reinforced, and all of the deploying aircraft - combat or otherwise - received an extensive series of enhancements. The F-3s initially flown out were replaced by aircraft that boasted environmental adaptations and upgrades to their weapons systems, engines, electronic warfare equipment and armament.⁹ Their operational capability was thereby substantially improved, but the various modifications were never likely entirely to offset some of the more fundamental shortcomings of the F-3's original specification. Furthermore, having been rushed into service to meet the immediate

contingency of the Gulf conflict, it could hardly be expected that the enhancements would all be entirely successful. In such circumstances, normal evaluation and trial processes must necessarily be accelerated, and the potential for error may then be increased. Equipment defects may not be spotted, or it may be that equipment does not fully match specified requirements, or is installed in such a way that it is difficult to use in operational conditions. Deployed aircrew and groundcrew are likely to find innumerable upgrades hard to accommodate in the middle of large-scale and very demanding operations.

In the meantime, the RAF's offensive posture in the Gulf was also being strengthened. Tornado GR-1 detachments deployed to Bahrain and Tabuk, in Saudi Arabia, in August and October 1990 respectively, and a further eighteen aircraft arrived at Dhahran in December. The Jaguars were also repositioned forward to Bahrain.¹⁰ More than 60 attack aircraft would thus be committed to the air campaign when Operation Desert Storm began in January 1991. But what role would they play?

It has been noted already that the Tornado GR-1 had been designed to undertake very specific low-level attack duties on NATO's Central Front. As its primary task, it was expected to conduct counter-air missions against Warsaw Pact airfields, using the runway-cratering bomb, JP-233, delivered via high-speed low-level overflight of the target. In the Gulf, the Iraqi Air Force was in a position to operate from a number of very large and well-prepared air bases, and the USAF lacked dedicated airfield-denial platforms and munitions, so the American Air Component Commander warmly embraced an early British offer to employ the GR-1 in this role.¹¹

The Jaguars, on the other hand, were not so rigidly tied to specific tasking. The broad expectation was that they would execute ground-attack missions, targeting the Iraqi army in Kuwait with unguided 1,000 lb bombs and the cluster bomb, BL-755 - another munition designed for release at low altitude. However, within a short time, doubts were being expressed about this scenario. In October, the British Joint Headquarters pointed out that the Jaguars would be very vulnerable at low level, and suggested that they might operate at higher altitude. But the only munition in their inventory that was suitable for high-level release - the 1,000 lb bomb - was not an effective weapon with which to attack small, mobile or dispersed ground targets. An alternative was needed, and the Jaguar detachment commander therefore recommended the acquisition of the American CBU-87 cluster bomb. Not only did CBU-87 meet the requirement for high-altitude release; it was also immediately available from USAF stocks in theatre.¹²

There are several reasons why the risks of low-level operations were viewed more seriously in relation to the Jaguar than the GR-1. While the Jaguar could only operate in daylight, the GR-1 secured at least some protection by flying at night, and was also fitted with more effective electronic counter-measures. Furthermore, while Jaguar tasking was chiefly in the restricted airspace over Kuwait, where the Iraqis had positioned a formidable array of ground-based air defences (GBAD), the GR-1s were not so rigidly confined, and could thus make more use

of evasive routing. Finally, on missions with JP-233, which the RAF had effectively 'sold' to US commanders, there was no choice, but to operate at low altitude. Yet a shift to higher-level flying was also envisaged for the GR-1s after the Iraqi Air Force had been dealt with. The RAF proposed that they should fly interdiction missions employing laser-guided bombs (LGBs), and the USAF confirmed their willingness to provide F-15s as laser designators.¹³

It would be wrong to suppose that the RAF only began operational flying in the Gulf at the beginning of Desert Storm in January 1991. In fact, most detachments effectively became operational as soon as they reached the Gulf. The F-3s again provide an especially notable example. Ultimately, between August 1990 and March 1991, they flew in excess of 2,000 combat air patrol (CAP) sorties. Yet their limited performance and self-defence capability caused them to be employed overwhelmingly in a supporting role to the coalition's main air defence effort, flying rear CAPs to give protection to so-called high-value assets, like airborne C2 platforms. Their patrol areas were located some distance behind a forward barrier of American and Saudi interceptors, which proved more than a match for the meagre Iraqi opposition dispatched against them after hostilities began. Nor were the F-3s risked on offensive missions into Iraqi airspace. At best, it can only be noted that their absence could have caused the coalition air defence effort to become unduly stretched, as platforms with the capabilities that the F-3 lacked might have been burdened with the rear CAP task, so detracting from the offensive effort. Only once did airborne F-3s come remotely close to combat, and there were no opportunities to intercept Iraqi aircraft.¹⁴

Meanwhile, the GR-1s found themselves confronted by an exceptionally difficult baptism of fire. The RAF later assessed that their JP-233 attacks achieved their aim by disrupting Iraqi Air Force operations following the launch of Desert Storm, but it was hard to draw any more positive conclusions, as the coalition's offensive counter-air campaign effectively secured air superiority within days. Moreover, four GR-1s were lost during these early missions, four aircrew being killed, while four more were captured. Three aircraft were shot down by SAMs during low-level missions against Iraqi airfields with conventional free-fall bombs, and one was lost on a JP-233 mission, although it is not certain that enemy air defences were responsible.¹⁵

Low-level flying thus proved extremely hazardous. Consequently, as soon as any tangible threat from the Iraqi Air Force had been eliminated, the UK Air Commander decided that GR-1 missions should in future be flown at higher altitude. Their only effective higher-level weapon was the Paveway LGB, but the GR-1s had no laser self-designation capability at this time and had to rely on other aircraft to function as third-party designators. However, the American F-15s originally earmarked for this task had in the meantime been reassigned to counter-Scud operations. Laser-designating aircraft, in the form of ageing Buccaneers, had therefore to be flown out from the UK, along with two experimental Thermal Imaging Airborne Laser Designating (TIALD) pods, which the GR-1s themselves could carry. While waiting for this capability to become fully operational in theatre, the three GR-1 detachments had no option but to fly higher-level missions using unguided 1,000 lb bombs. These attacks were mostly very

inaccurate; aircrew were not trained to operate in this way, and the aircraft were not optimised to do so either.¹⁶ On the other hand, no more GR-1s were brought down by the Iraqis during this phase of the campaign. The only aircraft loss resulted from self-damage caused by the premature explosion of munitions; the crew ejected safely, but were taken prisoner.¹⁷

Then, early in February, the GR-1s began laser-guided bombing and there was a pronounced change in their fortunes. Indeed, executing a wide range of interdiction strikes, they achieved what was, at the time, probably the most accurate bombing in the RAF's history. With TIALD alone, they hit 229 pin-point targets in a period of eighteen days.¹⁸ One aircraft was shot down by an Iraqi SAM on 14 February, but this was the only casualty incurred during an LGB mission.¹⁹

By contrast with the GR-1s, the tactics to be employed by the Jaguar detachment remained uncertain during the final countdown to Desert Storm. Although concerns were mounting over the potential risks involved in operating over Kuwait at low altitude in daylight, the proposed solution - the procurement of CBU-87 cluster bombs for higher-level release - was subject to some delay. In the meantime, the Jaguar's lower media profile and a lack of clear direction from higher command levels left the detachment commander with greater freedom to decide how to deploy his aircraft. He duly concluded that they would face too great a threat at low level, and that they should therefore operate higher up, in an environment where they would at least derive some protection from coalition SEAD platforms, such as USAF Wild Weasels and EF-111 Ravens, and air superiority fighters.

Early Jaguar missions flown with free-fall 1,000 lb bombs provided ample evidence of extremely heavy Iraqi AAA throughout the area of operations, so the detachment continued to fly at higher altitude. Clearance to carry the CBU-87 was ultimately received at the end of January, increasing the range of targets that the Jaguars could attack, but a combination of software and carriage limitations reduced the weapon's effectiveness. These were a direct consequence of its relatively late acquisition. Until the final week of the campaign, the Jaguars therefore flew the majority of their missions with 1,000 lb bombs.

The Jaguars would eventually execute more than 600 sorties without loss during Desert Storm. They fulfilled their interdiction tasking to the extent that they delivered a high proportion of their weapons into their target areas, although with far less accuracy than the level associated with precision-guided munitions (PGMs). Moreover, they also mounted a number of anti-shiping missions, targeting Iraqi fast patrol boats with their cannon and with CRV-7 rockets. CRV-7 was, however, another late acquisition, and it proved difficult to launch accurately until computed weapon aiming became available during the final stages of the campaign. After that, it was successfully employed against a variety of Iraqi ground targets.²⁰

In assessing the RAF's performance in the Gulf, it is important to consider the problems it faced in context. Nearly two decades had been spent preparing for a conflict in the NATO area conducted from British and European main operating bases. Personnel had exhibited

a high degree of resourcefulness and adaptability in deploying and sustaining so many aircraft beyond European frontiers and in mounting operations from unfamiliar, crowded and sometimes poorly prepared airfields. The logistical strain had been immense; as one RAF supplier later recorded, 'we had shown that we could effectively project air power, but the cost had been exorbitant: we had taken too much equipment, we had not used it at all well, and we had lost far too much'.²¹

And yet, with American and Saudi support, the challenges were in due course overcome.²² Although they had all required extensive modification for Operation Granby, the air transport fleet, tankers, support helicopters and Nimrods all fulfilled their assigned tasks very effectively. RAF transport aircraft moved approximately 25,000 passengers and 31,000 tonnes of freight into the Gulf; in theatre, Chinook and Puma helicopters carried more than 12,000 troops and over 1 million kgs of freight. During the period of hostilities alone, the tankers offloaded 13,000 tonnes of fuel to both RAF and other coalition aircraft; Nimrod MR2s helped to enforce the UN economic embargo of Iraq, challenging no fewer than 6,552 ships in Gulf waters, and they subsequently assisted coalition naval units with the identification and interception of Iraqi naval vessels. The Jaguars and Tornado GR-1As proved their worth as reconnaissance platforms, providing valuable targeting and battle damage intelligence.²³

Nevertheless, the Gulf conflict did to an extent undermine confidence in the RAF's front-line combat capability. The anticipated role within the NATO area had resulted in an over-commitment to a limited number of tasks, and a loss of tactical flexibility. A short-term solution of sorts had been found via the last-minute procurement of new weapons and equipment, and equally accelerated on-the-job training for the air and ground crew involved, but this was far from ideal. It worked - to the extent that it did work - because of the exceptionally high calibre of so many RAF personnel, and because the Service could still call on the support of a very large engineering, supply and industrial infrastructure. But short-term measures could never fully address some of the more fundamental questions that the Gulf War raised about doctrine, training and equipment.²⁴

After British forces were withdrawn from the Gulf at the end of the war, a major lessons-gathering exercise was launched. Originating at unit level, identified lessons were then staffed upwards through the command chain, and compiled into overall reports for the air, land and maritime environments.²⁵ These were then endorsed by the high command, and finally by the Ministry of Defence.

There were good reasons why the RAF report might have been decidedly defensive in tone. Its operations had come under the media spotlight far more than those of the other Armed Services during Desert Storm; this reflected the fact that the RAF participated in the entirety of the campaign, whereas the Army only became involved at the very end, and maritime operations, although important, were peripheral in character. Some reporting had predictably been critical due to the losses sustained by the Tornado GR-1 force.

Additionally, there was the issue of the impending post-Cold War reductions in defence spending. While British forces were engaged in their largest overseas operation in decades, in London the Ministry of Defence was putting the finishing touches on the *Options for Change* defence review, which ushered in a series of swathing cutbacks. The Armed Services harboured no illusions about what was in store, and it would have been entirely logical, in the circumstances, to reason that compelling evidence of war-fighting prowess in the Gulf might offer a measure of protection from the forthcoming economies. Some such perspective could have led to pressure within the Services to ensure that the various after-action reports presented their respective contributions in a favourable light.

Finally, the truth is that the war had seriously undermined a number of the more basic assumptions that underpinned the RAF's operational posture. It suggested that low-altitude tactics did not provide the anticipated degree protection against GBAD, and simultaneously offered abundant evidence of the capability of precision-guided air weapons released from higher up. US SEAD had substantially reduced the threats that the RAF had identified to aircraft operating at this level. Hence, the war appeared to suggest that future air operations were likely to be conducted at higher altitude, something that implied a radical shift in RAF doctrine, training and tactics, which could well have been difficult to accomplish quickly even if appropriate equipment had been available. As it was, most combat aircraft were not due to be replaced for some years. In such circumstances, the RAF high command might reasonably have hesitated before accepting that some far-reaching reforms were required.

Viewed from this perspective, the post-Gulf War air lessons report can only be described as a very honest and thorough document. There was no attempt to deny that the conflict had raised some serious questions about war-fighting preparedness and operational capability. The front-line aircraft fleets were all in need of improved communications, navigation and self-defence equipment; better interoperability with potential coalition partners was required, together with enhanced logistical provisions to support future out-of-area operations, and more AAR capacity to provide greater reach to aircraft operating away from main or forward operating bases. More air transport was needed, and there had been an over-dependence on the US for SEAD. There were proposals to rationalise the provision of mission support, and it was argued that the offensive effort would have benefited from the supply of more up-to-date and accurate battle-damage assessment (BDA).²⁶

The Tornado F-3 came in for some surprisingly direct criticism. However, this is not difficult to explain. By 1991, it was well known that the aircraft suffered from a number of serious shortcomings and it was hoped - optimistically - that the F-3's place in the RAF's order of battle would be taken by the Eurofighter at the turn of the century. Thus, while the report contended that the F-3 had broadly fulfilled the role for which it was designed, it also acknowledged the aircraft's limitations, although pointing out that these were fully understood and that measures had already been implemented to procure a very much more capable air defence platform.

It was when the report turned to the subject of offensive air warfare that its tone became noticeably more cautious. Full recognition was accorded to the vital role that PGMs had played in the Gulf, and the RAF stressed that more of these weapons would be used in future. Specific requirements were similarly identified for anti-armour munitions and stand-off missiles that would reduce the exposure of offensive aircraft to hostile GBAD. Equally, it was accepted that aircrew should be better trained and equipped to fly offensive missions at higher altitudes. And yet these matters were only addressed quite broadly, alongside an explicit commitment to the existing low-level capabilities. If there was now an acknowledged need for increased tactical flexibility, it did not appear that there was to be a general shift in offensive doctrine towards higher-altitude flying.²⁷

The financial constraints imposed on the Armed Services during the 1990s inevitably complicated the task of implementing the lessons of the first Gulf War. Successive defence reviews were initiated by *Options for Change*, culminating in the *Strategic Defence Review* of 1998. In real terms, between 1990 and 2002, UK defence expenditure fell by more than 20 per cent; defence spending absorbed around 4 per cent of GDP at the beginning of this period but about 2.5 per cent at the end. The RAF's front-line force shrank from 63 squadrons to 43; the number of RAF personnel was reduced from 88,000 to 53,000.²⁸ Such reductions in scale did provide scope for improving the standard of equipment; one Conservative Defence Secretary championed the concept of 'smaller but better' in the early 1990s.²⁹ Yet this was only true to a limited degree, and it is quite clear that the funding cuts impeded the exploitation of some Gulf War lessons.

The operational environment imposed further restrictions. Behind the defence cuts of the early 1990s lay the assumption that, following the end of the Cold War, operational pressures upon the Armed Services would decline. Understandably, perhaps, at least some policy-makers and senior officers had difficulty envisaging how the changed situation would in fact generate entirely new commitments, with major resource and financial implications. No-fly zones were created over northern and southern Iraq, and NATO forces were deployed into the Former Yugoslavia. In 1995, Operation Deliberate Force was mounted against Serb forces in Bosnia, Operation Desert Fox marked the culmination of the UNSCOM crisis in 1998, and the Kosovo conflict followed in 1999. The central role of air power in all of these operations ensured that the RAF remained the British government's weapon of first choice, and yet this simple truth was seldom openly acknowledged, and it exerted minimal impact on defence policy. The Service was thus committed to a decade of live operations while simultaneously its front-line strength was drastically cut back - ironically on the basis that operational commitments were reducing.

Beyond this, it should be added that priorities inevitably changed as time went by. Managing the broader defence drawdown and the accompanying organisational changes, and simultaneously conducting a series of major operations - all of this represented a significant and challenging task, but also a current task. These were the dominant factors shaping present and future defence policy. It was difficult to maintain any comparable focus upon a past conflict, which faded further from view as each day went by.

It was possible to implement some lessons from the Gulf War quite easily. A new entity, the Air Warfare Centre (AWC), emerged from the recommendations for rationalising mission support, and was assigned responsibility for the development and implementation of operational and tactical doctrine, and for the provision of integrated mission support to RAF units. In addition to its doctrinal functions, the AWC's duties would range across operational analysis, equipment evaluation, air intelligence, electronic warfare, and air warfare training.³⁰ These activities, previously assigned to several different organisations, were now to be placed under one roof. However, as few new capabilities or additional personnel were required, the AWC's establishment did not have especially significant financial implications.

Otherwise, the 1990s would witness a substantial investment in the air transport fleet, including a C-130 upgrade, the procurement of new support helicopters, and ultimately the leasing of American C-17s.³¹ It was deemed unnecessary to enlarge the air-to-air refuelling fleet, as reductions in the number of combat squadrons lowered the demand for AAR to levels more in line with existing provisions,³² but there were changes in the RAF's logistical training and organisation, which reflected a renewed commitment to mobility and overseas deployments; augmentations were approved for certain dedicated mobile elements, notably the Tactical Communications Wing, despite the cuts being made across the Service as a whole.³³ To facilitate the task of deploying the Tornado out of area, air-portable spares packages known as Priming Equipment Packs were also prepared.³⁴ Thus, as the 1990s progressed, there was some improvement in the RAF's capacity to operate detachments from relatively austere overseas bases.

Yet it is probable that the need for enhanced mobility in the post-Cold War era would have led to the implementation of at least some of these measures in any case; the influence of the Gulf War should not be exaggerated. As the focus of British defence policy shifted outside the NATO area, some additional investment in air transport and mobile support units would have been essential. Furthermore, we should not overestimate the extent of such improvements as were achieved. The chief overseas commitments of the 1990s - in Saudi Arabia and Kuwait - exposed the RAF's support capabilities to a rather less rigorous audit than they received during Operation Granby. Indeed, they were quickly transformed into extended commitments, underpinned by significant logistical backing from the UK and vital host-nation support. And even this was not enough to ensure that aircraft of the Tornado's technical sophistication became much easier to operate away from their main bases. At the turn of the century, to fulfil a coalition mission involving just two aircraft, the RAF had six F-3s deployed in Saudi Arabia, which received priority in the allocation of spares over those based in the UK. For some key items, overseas spares holdings were twice the size of holdings at UK F-3 bases.³⁵

The *Strategic Defence Review* cast doubt on the capacity of the UK's military logistics infrastructure to support extended or concurrent overseas commitments. It proposed 'enhancing the ability of the Royal Air Force to conduct operations from remote locations with

little or no infrastructure by providing logistic support needed for deployed operating bases.³⁶ Very similar recommendations had been made following the Gulf War.

A variety of important aircraft enhancements were undertaken in the 1990s. As we have seen, virtually all of the aircraft originally deployed had required extensive modification during the operation to provide effective self-defence capabilities, including the installation of chaff and flare dispensers, radar warning receivers, electronic counter-measures, missile advance-warning systems and towed radar decoys.³⁷ In subsequent conflicts, aircraft normally deployed with this equipment already fitted.³⁸ But the ongoing reductions in defence spending prevented a number of the post-Granby equipment recommendations from being implemented. In 1999, the MOD's report on the lessons of the Kosovo conflict listed a series of requirements for the RAF, including improved anti-armour munitions, better electronic warfare equipment and secure air-to-air communications. It was also noted that the RAF had relied heavily on the US for SEAD, and that there had been a lack of timely BDA.³⁹ Eight years earlier, after the Gulf War, the same deficiencies had been recorded; at least some were being dealt with by specific measures, which had yet to deliver, but a number of noteworthy capability gaps were still in evidence.⁴⁰

The scope for exploiting the air combat lessons of the Gulf War was predictably constrained by the fundamental design features of the various fast jets. Thus, while the F-3's self-defence capability could be enhanced, there was no point in attempting to transform it into an accomplished dogfighter, nor could its higher-altitude performance be significantly improved. For an aircraft with vastly superior air-to-air combat characteristics, the RAF would have to wait for Eurofighter. Unfortunately, however, its introduction was repeatedly delayed. To provide an improved interim air defence capability, it was necessary to undertake an F-3 upgrade programme, which primarily involved the installation of both ASRAAM and AMRAAM.⁴¹ Similarly, while the Tornado GR-4 standard superseded the GR-1, the aircraft's operating parameters and performance did not represent a very substantial advance on the original GR-1 specification, with its emphasis on low-level missions. The employment of Storm Shadow, the stand-off missile ordered after the Gulf War, promised to reduce the GR-4's exposure to hostile GBAD, but it was only suitable for use against larger fixed targets, such as command bunkers, communications facilities and other military infrastructure.⁴²

And yet, probably the most important air combat lesson identified during the Gulf War was in fact implemented. The main air lessons study may not have accepted outright that the war potentially marked a fundamental tactical shift, but subsequent combat operations were overwhelmingly conducted at higher altitudes by aircraft equipped with PGMs. The Paveway LGB was used by the RAF in preference to any other air weapon over Bosnia in 1995, Iraq from 1998, and Kosovo in 1999. Indeed, Paveway's utility was such that its carriage was extended beyond the Tornado fleet to the Jaguar and Harrier.⁴³ Bombing accuracy was in this way radically improved by comparison with the standards recorded when non-precision weapons were carried, adding at least some weight to arguments that more could now be achieved with less.

But the transformation of offensive air tactics had to be accomplished within rigid financial limits, with predictable consequences at squadron level. Following the withdrawal of the Buccaneer from service, together with its Pavespike laser designator, the only airborne designator left available to the RAF was the TIALD pod. The pods that had been intended for the Tornado then had to be shared with the Harrier and Jaguar fleets too, and assigned to detachments deployed in the Gulf, and on operations over the Former Yugoslavia. Very few were left behind in the UK for training purposes. At the turn of the century, ten years after Iraq invaded Kuwait, the UK Defence Procurement Executive advised the House of Commons Select Committee on Defence that a total of only 23 TIALD pods had been bought for the three aircraft fleets. The scope for further purchases was restricted by the pod's high unit price (£2.7 million per pod in the year 2000), which reflected the limited scale of production; TIALD was never manufactured in quantity, as it was not widely exported.⁴⁴

The RAF published figures in the aftermath of the Kosovo conflict indicating that it had been unable to raise the accuracy of laser-guided bombing since the Gulf War; and yet very few of the Tornado GR-1 aircrew who deployed to the Gulf in 1990 had previous experience with LGBs. Officially, at least, the weather was blamed for many of the difficulties encountered over Serbia and Kosovo, but some aircrew felt that they had not been adequately prepared for the use of the TIALD-Paveway combination.⁴⁵ Despite the operational pressures confronting the RAF in the 1990s, and Paveway's critical importance within each consecutive operation, their views suggest that funding may have been insufficient to support the essential parallel training activity.

Additionally, there is a case for arguing that the switch to higher-level tactics and precision-guided bombing stemmed from the specific requirements of air warfare in the 1990s as opposed to a conscious implementation of post-Gulf War lessons. Higher-altitude flying reflected the need to align RAF tactics with those of the USAF, and also the SAM and AAA threats confronting low-flying aircraft over Yugoslavia and Iraq. A continued commitment to low-level tactics may at the same time be inferred from the fact that a new LGB, Paveway 3, was at first ordered in the early 1990s as a low-level munition, although it was also suitable for higher-level release.⁴⁶ Finally, broader considerations also lay behind the tactical reorientation. The popular perspective was that higher-altitude missions flown with PGMs were casualty-free and caused the absolute minimum of collateral damage - characteristics that inevitably appealed to politicians.⁴⁷

Conclusion

The RAF did not ignore the main air lessons identified after the Gulf War. Having experienced an extremely challenging initiation into the problems of post-Cold War operations, it mounted an extended and thorough lessons-gathering exercise that exerted a significant influence in subsequent years. There was a Service-wide determination to learn the lessons of the conflict, which helped to ensure that, a decade later, a smaller front-line force could boast superior general war-fighting capabilities, and improved deployability, while the Tornado GR, Harrier

and Jaguar forces had undergone a veritable tactical revolution. Yet the lessons of the Gulf War could have been more fully acted upon. Some identified lessons were only implemented to meet the operational requirements of later conflicts over Yugoslavia and Iraq, some elicited only a slow or partial response, and others failed to secure the necessary funding or support.

There is nothing particularly unusual in this. Indeed, historically, it would have been far more remarkable if all the post-conflict lessons had been exploited. The difficulties involved have a variety of explanations. To begin with, there is the lessons report itself. The importance of learning lessons may be well understood; a robust lessons process may be in place; and yet this does not automatically ensure that the most fundamental deficiencies are pinpointed. Within military organisations, there is an entirely understandable reluctance to draw public censure, to invite criticism from other parts of the defence establishment, or to present senior officers or ministers with recommendations that are certain to be deemed unrealistic because they are too numerous, or too costly, or both. Viewed from this perspective, the RAF's Gulf War lessons report must be considered quite a pragmatic document, but it might have dealt more thoroughly with the issue of offensive tactics - with the wartime shift to higher-level flying and PGMs.

That more space was not devoted to this particularly important subject stemmed partly from entirely genuine concerns that past errors should not be repeated. The lesson was not that RAF combat aircraft should operate at low level or high level; rather, it was that there should be sufficient flexibility to operate at both. It also seemed certain that any general attempt to revise tactics would be hindered by the basic design features of the main offensive air platforms - by the fact that they were optimised for low-altitude flying. But the RAF high command was, nonetheless, unwilling to draw too much attention to the very obvious failure of low-level tactics in the specific circumstances of the Gulf operation.

If lessons reports must be honest, then it is also essential that they are focused. If, for example, an operational-level report is allowed to become submerged under a plethora of tactical details, the lessons implementation process may end up being spread across an excessive number of separate projects, to the detriment of many, if not all. It is better to identify a narrower range of realistic goals, and it is vital that these are understood to command priority status by all personnel concerned. This, in turn, is likely to have far-reaching organisational implications. It is possible that, to some extent, insufficient prioritisation lay behind the fact that some of the RAF's Gulf War lessons were exploited less fully than others. This was certainly the view held by a number of officers involved in later lessons studies.⁴⁸

Third, we should note that lessons are rarely, if ever, implemented in a vacuum; attention and resources may well be diverted by competing pressures, and this was certainly true after the Gulf War. Indeed, even if the air lessons report had offered more direct criticisms and made stronger recommendations, even if prioritisation had been better, or follow-up action had been less constrained by technological factors, the 1990s political and financial environment would

have erected a series of truly formidable obstacles. At the time, defence was dominated by the fallout from *Options for Change*, the accompanying structural reforms, and the sequence of air operations mounted over Iraq and the Former Yugoslavia. There was minimal opportunity to pause and reflect on past experience. In this challenging environment, it is hardly surprising that the RAF should have become increasingly engrossed in issues of day-to-day command, management and planning for the future, even if this was, to an extent, detrimental to the Gulf War lessons exploitation process.

Finally, there is the more difficult question of whether or not the RAF can legitimately claim to possess a learning culture. The answer must inevitably be somewhat subjective and imprecise but, to this author at any rate, the picture appears mixed. On the one hand, it cannot be denied that a great deal of valuable work has been done in the tactical and sub-tactical lessons area since the first Gulf War. Subsequent operations have given rise to a multiplicity of detachment and unit lessons reports; IT modernisation across defence during the 1990s led to the development of improved lessons collection, storage and retrieval processes, and to the construction of lessons databases from which it has become far easier to spot recurring themes and monitor the progress of implementation. Augmenting the work of the individual Armed Services, the Directorate of Operational Capability (DOC) at the Ministry of Defence has been assigned responsibility for the preparation of defence lessons reports, which inevitably incorporate some air lessons, as do such joint reports as emanate from the lessons section at the Permanent Joint Headquarters (PJHQ).

On the other hand, however, there are indications that the RAF has not always paid sufficient attention to lessons exploitation at the operational level. The only operational lessons report that it produced between the Gulf War and the Kosovo conflict was a very brief paper on Operation Deliberate Force in 1995, written while hostilities were still in progress. No overall air lessons report was prepared on RAF operations in response to the crisis in Bosnia, in which eight types of fixed-wing aircraft flew more than 15,500 sorties over a period of five years, in addition to a very substantial flying effort mounted by the support helicopters and transport aircraft. The Tornado GR-1s and GR-4s between them flew 13,200 sorties in the southern Iraq No-Fly Zone over more than a decade, while GR-1s, Harriers and Jaguars mounted 9,700 in the northern zone;⁴⁹ a number of other aircraft types were also involved, such as tankers, reconnaissance platforms and F-3s; but the RAF did not conduct operational-level lessons studies of its contribution to Southern or Northern Watch.

Furthermore, the RAF did not create a permanent, dedicated, lessons staff during the 1990s, so temporary ad hoc teams had to be formed to prepare reports in the aftermath of the Kosovo conflict and following the manoeuvre phase of the second Gulf War (Operation Telic) in 2003. No overall air lessons report has been prepared on the subsequent counter-insurgency phases of Operation Telic, nor, after 12 years, have air operations over Afghanistan been the subject of an RAF lessons study. Ultimately, a permanent lessons cell was created within Strike (subsequently Air) Command Headquarters, but with a staff far smaller and of far more junior rank than that

of its counterpart at the Army's Lessons Exploitation Centre; again, it is primarily concerned with tactical lessons collection activity. The operational level has largely been left to PJHQ and the DOC. The disadvantages inherent in this situation from the RAF's perspective should be obvious. To all intents and purposes, there is currently no organisation within the defence community that is clearly tasked and resourced to conduct the identification of UK air power lessons. None of this necessarily means that the RAF lacks a culture of learning, but it is also hard to avoid the conclusion that this culture could be more deeply rooted and that, until it is, at least some opportunities for identifying, learning and exploiting lessons will probably be missed.

Notes

¹ Eliot A Cohen and John Gooch, *Military Misfortunes: The Anatomy of Failure in War* (Free Press, New York, 2006), pp. 26, 233.

² Cohen and Gooch, pp. 6-16.

³ RAF press release, 'Operation Granby – Fact Sheet', 9 May 1991, pp. 2-4 (held at Air Historical Branch).

⁴ Sebastian Cox and Sebastian Ritchie, 'The Gulf War and UK Air Power', in Sebastian Cox and Peter Gray (eds), *Air Power History: Turning Points from Kitty Hawk to Kosovo* (Frank Cass, London, 2002), p. 288.

⁵ Ibid., p. 290.

⁶ Ibid., p. 291.

⁷ Air Publication 3040, 5th Edition, p. 3 (held at Air Historical Branch).

⁸ Cox and Ritchie, 'The Gulf War and UK Air Power', pp. 290-291.

⁹ John Lake, 'Panavia Tornado Variant Briefing Part Two, Air Defence Variant', *World Air Power Journal*, Autumn 1997, p. 126.

¹⁰ RAF press release, 'Operation GRANBY – Fact Sheet', 9 May 1991, pp. 1-2.

¹¹ Cox and Ritchie, 'The Gulf War and UK Air Power', pp. 292-294.

¹² Ibid., p. 295.

¹³ Ibid., pp. 295, 297.

¹⁴ Ibid., pp. 290-292; Command Paper (CM) 1559, *Statement on the Defence Estimates, 1991* (HMSO, London, 1991), p. 18. Command Papers are British government publications presented to Parliament.

¹⁵ CM 1981, *Statement on the Defence Estimates, 1992* (HMSO, London, 1992), p. 75.

¹⁶ Cox and Ritchie, 'The Gulf War and UK Air Power', pp. 297-298.

¹⁷ CM 1981, p. 75.

¹⁸ *TIALD: The Gulf War* (GEC Ferranti corporate publication, 1991), p. 48.

¹⁹ CM 1981, p. 75.

²⁰ Cox and Ritchie, 'The Gulf War and UK Air Power', pp. 295-297; Lindsay Peacock, 'Cats in Action: Jaguars in the Gulf', *RAF Yearbook Special: Air War in the Gulf* (Royal Air Force Benevolent Fund, Gloucester, 1991), p. 28.

²¹ Group Captain Robin Springett, 'Logistics in the Post Cold War Era', *Royal Air Force Historical Society Journal*, 19 (1999), p. 105.

²² Air Commodore Paul Crotty, 'Logistics Support in the Gulf War', *Royal Air Force Historical Society Journal*, 19 (1999), pp. 103-104.

²³ RAF press release, 'Operation Granby – Fact Sheet', 9 May 1991; pp. 4, 6-9. Personnel and freight were also flown into theatre by civil charter aircraft.

²⁴ Cox and Ritchie, 'The Gulf War and UK Air Power', pp. 299-300.

²⁵ CM 1559, p. 26.

²⁶ Sebastian Ritchie, *Operation Granby: Jaguar Operations* (unpublished Air Historical Branch narrative), Appendix B.

²⁷ *Ibid.*

²⁸ www.dasa.mod.uk/natstats/ukds/2002, Tables 2.8 and 3.3, accessed 10 October 2008.

²⁹ CM 1981, p. 32.

³⁰ www.raf.mod.uk/rafwaddington/aboutus/airwarfarecentre.cfm; www.raf.mod.uk/rafwaddington/aboutus/otherunits.cfm; accessed 10 October 2008.

³¹ CM 2550, *Statement on the Defence Estimates, 1994* (HMSO, London, 1994), pp. 59-60; CM 3999, *The Strategic Defence Review* (The Stationery Office, London, 1998), p. 25.

³² CM 4724, *Kosovo: Lessons from the Crisis* (The Stationery Office, London, 2000), Chapter 7, Air Operations – Conduct and Lessons, para 7.45.

³³ S. McLaughlin, 'Ubique Loquimur – Tactical Communications Wing', *RAF PR Magazine*, 1998, p. 16 (held at Air Historical Branch).

³⁴ Sebastian Ritchie, 'The Decline of Mobility: The RAF and Deployed Operations since 1945', *Royal Air Force Historical Society Journal*, 19 (1999), p. 72; Group Captain Robin Springett, 'Logistics in the Post Cold War Era', pp. 105-106.

³⁵ www.parliament.the-stationery-office.co.uk, Select Committee on Defence Thirteenth Report, 26 July 2000; Select Committee on Defence Sixteenth Special Report, 25 October 2000, ANNEX, accessed 10 October 2008.

³⁶ *The Strategic Defence Review: Supporting Essays* (The Stationery Office, London, 1998), Essay 6, p. 6-5, para 19.

³⁷ RAF press release, 'Operation Granby – Fact Sheet', 9 May 1991, p. 10.

³⁸ See for example Lake, 'Panavia Tornado Variant Briefing Part Two', p. 127.

³⁹ CM 4724, Chapter 7, *passim*.

⁴⁰ For example, the Brimstone anti-armour munition project, which dated back to the 1980s, was revived after the Gulf War. However, the weapon was not ready for service in 1999, and subsequent protracted delays finally resulted in the purchase of American Maverick anti-armour missiles in 2001 to provide a stop-gap capability.

⁴¹ The Advanced Short-Range Air-to-Air Missile and the Advanced Medium-Range Air-to-Air Missile; see CM 3223, *Statement on the Defence Estimates, 1996* (HMSO, London, 1996), p. 61.

⁴² CM 4446, *Defence White Paper* (The Stationery Office, London, 1999), p. 26. Although the Storm Shadow stand-off munition was used during the second Gulf War (March-April 2003), the vast majority of GR4 offensive missions employed Paveway 2 laser-guided bombs and involved over-flight of the target.

⁴³ www.parliament.the-stationery-office.co.uk, 11 Feb 2000, Column 344W, John Howe, Chief Executive of the Defence Procurement Agency, to Menzies Campbell MP, 11 February 2000,

accessed 10 October 2008.

⁴⁴ Ibid.

⁴⁵ www.harrier.org.uk, *RAF's Kosovo Performance Revealed*, August 2000, accessed 10 October 2008.

⁴⁶ CM 2270, *Statement on the Defence Estimates, 1993* (HMSO, 1993), p. 70.

⁴⁷ See for example CM 4724, Chapter 7, paragraphs 7.8-7.14. In this official report on the Kosovo conflict produced by the British government, the accuracy of bombing was primarily measured in terms of the minimization of collateral damage. The report also emphasized the link between higher altitude flying and casualty limitation.

⁴⁸ The author's conversation with the Kosovo Lessons Team, 6 September 1999.

⁴⁹ Data held at Air Historical Branch.

Operation GRANBY: Maritime Air Reconnaissance¹

By Dr Sebastian Ritchie

Biography: Dr Sebastian Ritchie obtained his PhD from King's College London and lectured at the University of Manchester before joining the Air Historical Branch (RAF) as an official historian. He is the author of a number of official histories covering RAF operations in Iraq, the Former Yugoslavia, Libya, Afghanistan, and more widely on aspects of air power and air operations.

Abstract: This article takes an in-depth look at one of the lesser known stories of the War, the contribution of the RAF's Nimrod MR2s between August 1990 and April 1991. The RAF's Nimrod MR2 detachment was confronted by a series of unforeseen and unfamiliar challenges. These stemmed less from the basic tasking to which the Nimrods were assigned than from the operating environment. Complex coalition operations conducted far out of area, over enclosed seas bordered by both enemy and neutral states. In this context the Nimrod MR2 force's achievement was impressive: 3 deployed aircraft achieved 60 sorties/month, challenged 6,325 ships, 85 Direct Support sorties were flown, and they participated in actions against 15 Iraqi vessels. This article analysis how that was achieved and identifies the key lessons learnt in the process.

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Introduction

This study surveys the history of Royal Air Force maritime air reconnaissance during Operation GRANBY. The first section provides a narrative on Nimrod MR2 operations in the Gulf between August 1990 and April 1991. For the bulk of this period, a detachment of three Nimrods based at Seeb, in Oman, was engaged in surface surveillance work with the coalition Maritime Interception Force (MIF); at the beginning of October, the detachment was also incorporated into the USCENTCOM Search and Rescue (SAR) organisation. Then, in January 1991, it was transferred from the MIF to Anti-Surface Unit Warfare (ASUW) operations in direct support (DS) of coalition naval units. Each of these three, very different roles is considered here in turn.

The second section employs a more thematic approach. The surface surveillance, SAR and DS roles were all familiar to the Nimrod squadrons in peacetime, but the Seeb detachment faced a range of testing challenges in executing these tasks in a multi-national coalition environment, far beyond the Nimrod's normal operating area and in close proximity to enemy forces. The aircraft itself required extensive modernisation to enhance its surveillance capability and its navigation, communications and self-defence systems. It was necessary to establish new command and control structures designed specifically for Operation GRANBY, and the Nimrods had to fly in confined and crowded airspace, where there was a significant threat of hostile activity, 'blue-on-blue' engagement and mid-air collision. The detachment's patrol area had to be determined so as to maximise operational gain in this situation, while minimising operational risk. Furthermore, overflight restrictions imposed by the surrounding Gulf states had to be carefully observed.

These four subjects – the Nimrod enhancement programme, command and control, the operations area, and overflight restrictions – are each considered in turn to establish what the key problems were, how they were addressed and how successfully they were overcome.

Historical Background

The Nimrod maritime patrol aircraft (MPA) entered service with the RAF in 1969, and became the workhorse of the UK's maritime air reconnaissance effort. During the 1970s, it served in the anti-submarine and surface vessel surveillance roles and undertook SAR duties in the North Atlantic and the North Sea. At the end of the decade, the MR2 upgrade incorporated a variety of improved communication, navigation, hunting and detection systems, including the Searchwater surface surveillance radar; in 1982, a detachment of Nimrod MR2s was committed to Operation CORPORATE, the Falklands conflict, flying from Ascension Island.

By the mid-1980s, the UK's maritime air reconnaissance force consisted of four squadrons of Nimrod MR2s located at RAF Kinloss and RAF St Mawgan. They came under the command of the AOC 18 Group, based alongside CINCFLEET at Northwood. They were predominantly engaged in the surveillance of Soviet naval vessels, although they also undertook deployments to a variety of overseas theatres, including the Persian Gulf. Under the auspices of Operation

MAGIC ROUNABOUT, Nimrods based at Seeb periodically flew surface surveillance sorties in the Gulf, supporting the Omani armed forces. This experience would prove very valuable during Operation GRANBY.

Following Iraq's invasion of Kuwait on 2 August 1990, UNSCR 660 called for her troops to be withdrawn and Resolution 661 imposed economic sanctions, prohibiting virtually all trade with the two countries, except for inbound medical supplies and certain specified foodstuffs. There was good reason to believe that such a measure would produce a rapid solution to the crisis, for Iraq was (and is) heavily dependent on imported food paid for by oil exports. A cessation of foreign trade would confront Saddam Hussein with the certainty of economic collapse and might therefore persuade him to end the occupation.

The imposition of effective economic sanctions requires a substantial policing effort. Moreover, attainment of the initial goal, in this case the cessation of Iraqi trade, does not bring the task of enforcement to an end. Sanctions may be observed one day and broken the next. Continuous monitoring must be maintained until the ultimate objective is achieved. Iraq's ocean-bound trade through the Persian Gulf could only be halted by the deployment of a substantial naval force, with comprehensive support from air reconnaissance units possessing advanced surface surveillance capabilities. This was a task for which the RAF's Nimrod MR2s were admirably suited.

Maritime Interception Force Operations

The decision to contribute a detachment of Nimrod MR2s to the MIF in the Gulf was approved by the Secretary of State for Defence on 8 August 1990. They were to assist naval units with the task of interception by identifying and reporting all shipping transiting through the area of operations. Four aircraft were to be made ready. Each was to be AAR capable and fitted with Yellowgate electronic support measures, colour Searchwater and STF 154, a secure communications package previously employed during Operation MAGIC ROUNABOUT. Self-defence was to be provided by chaff and flare dispensing systems. Deployed aircraft were also to be fitted with ASR equipment.

It was not immediately clear where the Nimrod detachment would be stationed. Although the Nimrod crews had considerable experience in operating from Seeb, the island base of Masirah was viewed as a better option. US Navy P-3 MPA were already operating from Masirah, and it was felt that Anglo-American forces might collaborate more effectively if the Nimrods were positioned there as well. Such taxing issues as command, control and communications, rules of engagement (ROE), areas of operation and combat identification could be more easily addressed.

Nevertheless, Seeb was ultimately selected for the detachment, partly because the Nimrod squadrons were already familiar with the base, partly because Seeb is located further north than Masirah in the Gulf of Oman. Based at Masirah, the Nimrods would have wasted flying

hours and fuel in transit to the Gulf; based at Seeb, they could be deployed in the theatre of operations without delay.

The Nimrods were to use their surface surveillance capability to monitor commercial shipping in the Gulf of Oman in support of the UN embargo on trade with Iraq, and to assist the Royal Navy and other coalition naval forces. On 10 August, 18 Group summarised the task as follows:

Primary mission for Nimrods will be surveillance of all shipping entering/leaving Persian Gulf ... through straits of Hormuz ... The primary operating area will be to the east of the straits of Hormuz to cover the main shipping lanes to the Far East and Europe.

Preliminary command and control arrangements were confirmed the same day. The Joint Commander of British forces in the Gulf (the AOC-in-C Strike Command) assumed operational command of the Nimrod detachment, while operational control was vested in the Air Commander British Forces Arabian Peninsular. Tactical command of the Nimrod detachment was exercised by the Detachment Commander, who reported to the Air Commander, but it was accepted that tactical control (TACON) might be delegated to the Royal Navy Task Group already deployed in the Gulf, Task Group 321.1 (under the Commander Task Group (CTG) 321.1), the Senior Naval Officer Middle East.

At this stage, the primary objective was to deploy the Nimrods to Seeb, establish the necessary base infrastructure and develop tasking procedures in consultation with other MPA and coalition naval units. The Detachment Commander, Wing Commander Andrew Neal (the Officer Commanding 120 Squadron) was responsible for each of these tasks. Arriving in theatre on 13 August, he had initially to establish contact with other maritime authorities in the region to develop a *modus operandi*. He met CTG 321.1 on board HMS York at Bahrain the following day, and then turned his attention to the US Navy and particularly the principal American warship in the Gulf, the aircraft carrier USS Independence. At a meeting with American naval officers, it was agreed that the Nimrod detachment would launch their first surface search and area familiarisation sortie on the 15th. During the flight, the Nimrod was challenged by Independence, and the ensuing three-way conversations on secure radio between the Nimrod Captain, the Detachment Commander and the carrier battle staff finalised the Nimrods' future operating procedures. On 16 August, the detachment flew two surface surveillance sorties in the Gulf of Oman. So commenced an operational routine that would continue until January 1991. The only major adjustment occurred early in September, when the operations area was extended into the Persian Gulf. Thereafter, the two daily sorties were divided between the Persian Gulf and the Gulf of Oman.

At first, the two daily Gulf of Oman sorties were of six and a half hours each between 0500 and 1900, west of 60° East, as far north as the Straits of Hormuz, while American P-3s covered the Gulf east of 60° East and south of 22.30° North between 1900 and 0500. Crews were tasked to

identify all vessels, with the aim of detecting actual or potential 'sanction busters'. This involved flying past the stern of each vessel at an altitude of 200 feet to confirm its name and port of registration; the vessel was then contacted on the maritime radio band and asked to identify its port of departure, its destination and the nature of its cargo. This information was relayed to Royal Navy and US Navy warships in the area, and to other agencies like the Joint Ocean Surveillance Centre at Northwood, and the newly created Embargo Surveillance Centre at the Department of Transport in London, both of which were collating intelligence about the movement of merchant vessels from a wide variety of sources.

Two aspects of these arrangements are particularly noteworthy. First, there were no plans whatsoever for the Nimrods to conduct this type of operation in the Gulf; a detailed Concept of Operations (CONOPS) for the Nimrods was only drafted in October, and a final version did not appear until November. This explains why every detail of their role was initially determined by the Detachment Commander. He fulfilled his task with the absolute minimum of higher direction, developing with coalition naval officers the tactical command and control arrangements and operating procedures that allowed the Nimrods to be effectively integrated into the MIF. Second, inevitably perhaps, as nothing was written down, the various parties involved – the Nimrod detachment, the Royal Navy and, to an extent, the US Navy – did not all emerge with identical perceptions of what had, in fact, been agreed.

By the end of their first week in theatre, the Nimrod detachment numbered 100 personnel, an establishment that increased over six weeks to 178. To fly two sorties per day, three aircraft were normally maintained in theatre. To maintain serviceability, each was replaced after six weeks via a 'rolling' changeover every two weeks, which was also used to replace one of the deployed aircrews and some groundcrew. Crews remained in theatre for eight weeks and each Nimrod squadron provided one crew for the GRANBY detachment.

An operations centre was established at Seeb and equipped with the RAF's most advanced communications systems, which provided links to Royal Navy vessels at sea, to HQBFME, to RAF Kinloss and St Mawgan and to 18 Group Headquarters. The operations centre issued tasking messages for the Nimrods, provided standard air operations services and control to aircraft in flight, disseminated in-flight and post-flight mission reports to concerned coalition authorities and units, processed and distributed photographs and relayed in-flight tactical signals between aircraft and coalition naval forces.

At first, integrating the Nimrods into the multi-national MIF required a considerable amount of trial and error. A number of early complications arose involving a variety of force elements due to inadequate communication and unfamiliarity with the Nimrod operations area. On 18 August, a Nimrod flew beyond the northern limit of this area – the Straits of Hormuz. On the 24th, HMS York tasked a Nimrod to search the area allocated the American P-3s. On 4 September, a Nimrod was launched in complete ignorance of the fact that an Iraqi freighter was being intercepted inside its patrol area by a substantial American naval force, including

Independence, and was then subjected to multiple conflicting instructions from the carrier, from the USS La Salle and the USS Goldsborough. Another Nimrod unexpectedly encountered a live-firing exercise by F18s from Independence in its patrol area. On 10 October, HMS Gloucester warned the Persian Gulf Nimrod not to fly closer than 25 nautical miles (NM) to any warship – a directive that would have prevented the aircraft from conducting much of its assigned tasking.

In addition to the various incidents involving naval vessels and their supporting aircraft, and other maritime air reconnaissance units, random encounters with an array of land-based aircraft were an intermittent but unexpected and unwelcome feature of Operation GRANBY. Early on the morning of 20 August, a Nimrod operating in the Gulf of Oman gained contact with two UAE Mirage fighters closing from the west. Attempts to contact the fighters failed and, after locating the Nimrod by radar, they made several practice intercepts before retreating. The Nimrod crew considered the threat serious enough to warrant evasive manoeuvres and the deployment of chaff. Less than a month later, the Persian Gulf sortie was flying at low altitude to investigate a surface contact, when a Dornier civil aircraft carrying an ABC News team attempted to fly an identical course only 200 feet above the Nimrod. Again, evasive action was necessary.

The wrinkles within the MIF were soon ironed out – a process assisted by the fact that all units shared the common goal of rational co-ordination and collaboration. When established procedures failed, mistakes were generally acknowledged and remedial measures implemented. But air 'deconfliction' proved harder to achieve. During November, the Nimrods were involved in a series of menacing confrontations with other military aircraft. French and Omani aircraft were involved, as well as two Tornados of unknown (but not British) origin. Nimrods were 'locked up' by airborne interception radars on several occasions, and were again compelled to take evasive measures and release chaff. No hostile aircraft were encountered, but these incidents clearly illustrated the danger of blue-on-blue engagements and the threats inherent in lone actions by newly deployed or maverick aircrews from supposedly friendly nations, as well as the formidable airspace management challenges that were being generated by the density of coalition air operations.

With two Nimrod sorties being flown daily for the MIF, consideration had soon to be given to the resource implications of their involvement in the embargo against Iraq and Kuwait. When, after one month, there was still no sign of an Iraqi withdrawal, the component units of the MIF were left with no option but to plan for a long-term commitment.

The primary concern at Seeb, Kinloss and Northwood was that the deployed detachment was consuming a disproportionately high number of planned Nimrod flying hours, forcing reductions in scheduled flying in the UK. There was, however, some scope for economy. After a month of MIF operations, the Nimrod crews were finding ways to reduce the amount of time required to cover their assigned patrol areas. The Air Commander therefore agreed that

they should be allowed to return to Seeb as soon as they had completed their basic area surveillance task, rather than remaining airborne until their official 'off task' time. Many flying hours were saved as a result. Nevertheless, it was argued by the maritime air staff at both Riyadh and High Wycombe that the Nimrod's task could be fulfilled by a single daily sortie of maximum duration, if some of their operations area was transferred to American MPA. Yet no such change in tasking could occur without the agreement of the Royal Navy, and CTG 321.1 proved reluctant to accept that the Nimrods should fly only one sortie per day, believing that this would deny his Task Group the support it required.

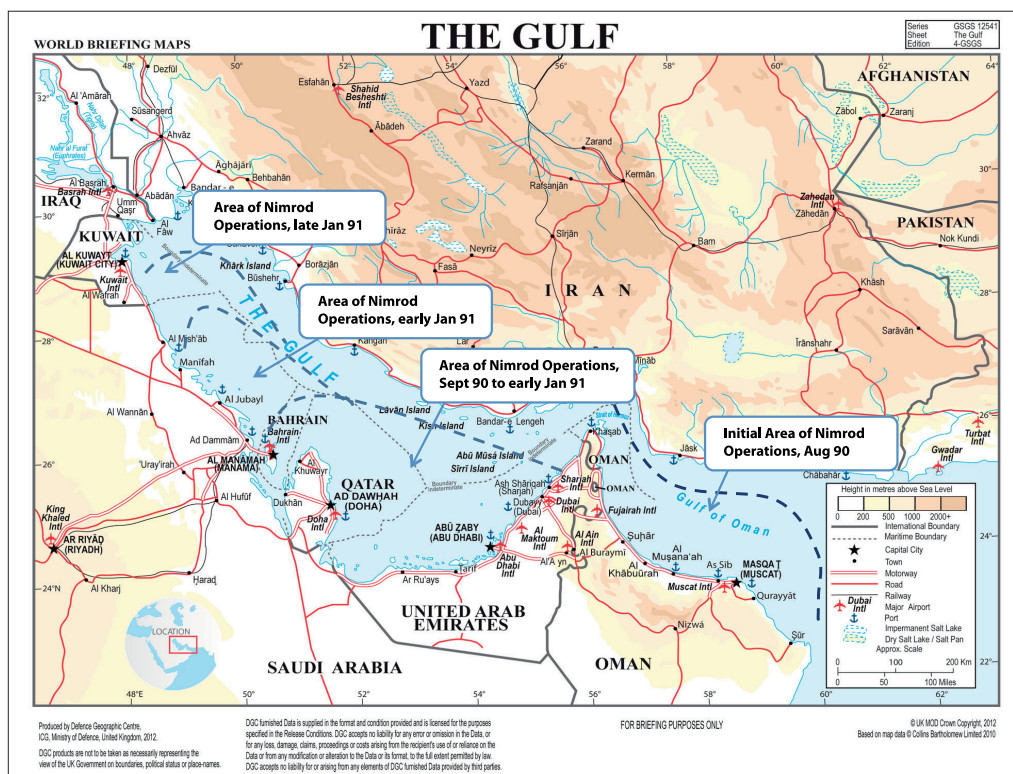
Thereafter, the issue of Nimrod flying hours languished, and the sortie rate continued at two per day for the duration of MIF operations. An assessment of how GRANBY was impacting upon Nimrod squadrons in the UK noted that important sacrifices were being made to maintain the Seeb detachment but concluded: 'The situation is not critical and, whilst we might expect gradual degradation of overall standards, careful management and selection of tasks should minimise the effects.'

If the sortie rate remained constant throughout the MIF phase of the operation, so too did the frequency of surface contacts and challenges per Nimrod sortie. The RAF's Nimrod MR2 detachment flew 127 operational sorties between 15 August and 15 October, challenging 2,650 vessels, a rate of nearly 21 challenges per sortie. In both November and December, the average was 23 challenges per sortie. In total, the Nimrods challenged 6,325 ships, but the overwhelming majority were categorised as 'not significant'. In fact, the UN embargo brought Iraqi and Kuwaiti maritime trade beyond the Gulf to an immediate halt, leaving the MIF to mop up the relatively small residue of actual or potential 'sanctions busters'. Such vessels were encountered with some frequency during the early stages of the operation, and the Nimrods witnessed several boarding incidents involving the American, British and French navies, but their numbers were negligible by November. There could be no better illustration of the MIF's unqualified success.

Nimrod Search and Rescue Operations

At the end of September 1990, the Nimrod detachment was assigned a second task – SAR. In November and in January 1991, Nimrods participated in SAR exercises and in a number of 'live' SAR incidents. By the time Operation DESERT STORM was launched, a highly effective coalition SAR organisation had been established in which the Seeb detachment played an important role.

Given the prevailing assumptions regarding the capability of the Iraqi armed forces, coalition commanders had no option but to expect high casualty rates following the outbreak of hostilities, and to plan SAR accordingly. Fortunately, casualties were very low and there was little demand for SAR, but this does not mean that the Nimrod detachment's efforts were wasted. By its very nature, SAR is a matter of contingency planning; it is an insurance that must exist even if it is not used.



Nimrod Operating Areas 1990 to 1991

The possibility of a SAR role for the Nimrod was considered from the very beginning of Operation GRANBY. The squadrons based at Kinloss and St Mawgan formed an important element within the UK SAR organisation and the aircraft deployed to Seeb were all equipped with bomb-bay loaded SAR equipment, including desert survival equipment. On 9 September, the Air Commander convened a meeting of the various RAF Detachment Commanders in the Gulf to discuss future roles and equipment requirements. A Nimrod SAR role was discussed at this stage, and the Detachment Commander afterwards took steps to integrate his aircraft into the emerging USCENTCOM SAR plan. The Nimrods were too vulnerable to operate in the immediate battle area, let alone behind enemy lines, but their assistance in locating aircrew brought down in the Gulf or in the Saudi Arabian desert promised to be invaluable. It was soon agreed that they should be incorporated in the theatre SAR organisation from 30 September. One aircraft and crew would be maintained at 90 minutes readiness for SAR operations and, if necessary, it was agreed that Nimrods might be diverted to SAR from other duties.

The SAR function was duly written into the draft Nimrod CONOPS in October, and the Nimrod's role was subsequently set out in a formal Combat Search and Rescue Plan issued by the USCENTCOM Joint Rescue Coordination Centre (JRCC). The plan required the Seeb detachment to provide appropriate forces for SAR and supervisory liaison personnel (the maritime cell at

AHQ), who would help to co-ordinate SAR support for all coalition forces. The detachment would be prepared to support and/or conduct SAR operations through the JRCC and the RAF maritime cell at Air Headquarters. A Rescue Co-ordination Centre (RCC) was to be established at Seeb.

Two SAR exercises were planned for November – one at sea, one on land. In the sea exercise, the participating Nimrod was tasked with locating a downed aircrew, dropping survival equipment and calling the JRCC for assistance. There was similar tasking in the land exercise, but the Nimrod was also to function as airborne mission commander. Even before the first exercise, however, the Nimrod detachment became involved in a 'live' SAR incident when, on 13 November, an RAF Jaguar crashed in the Saudi Arabian desert. The airborne MIF Nimrod was re-tasked on to SAR and proceeded to the crash site, assuming the role of on-scene commander and then passing the task to a second Nimrod, which acted as a communications platform for other coalition units in the area. Sadly, the Jaguar pilot died in the crash.

The sea exercise, mounted two days later, ran according to plan, but the land exercise was transformed into a live incident when a sandstorm prevented the rescue helicopter from reaching the personnel acting as 'survivors'. As they were thus confronted by the prospect of a night in the desert with no suitable equipment, a Nimrod was directed to the scene and dropped Containers Land Equipment (CLE) – the first occasion upon which Nimrod CLE had ever been used 'in anger'. The survivors later commented favourably on the contents of the pack. Unfortunately, on the following day, the Nimrod was unable to relocate the survivors and they were eventually found and rescued by helicopter. Problems with the ground radio were partly to blame, but the episode reinforced doubts about the Nimrod's navigation system, the accuracy of which had been under scrutiny for some time. The installation of GPS – then a new and revolutionary technology – was proposed as an effective remedy.

The key lessons from the exercises concerned communications. The Nimrods had been handicapped by their lack of access to US national cryptography, and by the fact that they were not equipped with secure high frequency (HF) radios. Both of these issues were fully addressed over the following weeks, and the next sea and land SAR exercises went largely according to plan. During the sea exercise, the single Nimrod engaged in MIF duties was unexpectedly re-tasked to assist a Cypriot merchant vessel, which had apparently hit a mine and was sinking. The Nimrod contacted two nearby ships and remained at the scene until the first arrived.

By mid-January 1991, a well prepared and highly effective SAR organisation had been established, capable of dealing with a wide range of operational contingencies. In the event, fortunately, coalition casualties were light during Operation DESERT STORM, and SAR was rarely needed. Nimrods were only involved in SAR missions on 29 January and 3 February, but the first was soon taken over by the Omanis and the second regrettably yielded no survivors.

As early as 22 January, the Nimrod Detachment Commander requested permission to relax the 90-minute readiness state for SAR, but he was to be disappointed. The AHQ insisted that the SAR capability was essential and had to be maintained, even if it was rarely called upon: 'SAR was ever thus.'

Nimrod Direct Support Operations

By mid-December 1990, the 'DESERT SHIELD' phase of Operation GRANBY was nearing its conclusion. It had become clear that neither international condemnation nor UN sanctions were likely to persuade Iraq to withdraw her forces from Kuwait; the only alternative was military action. The cessation of MIF operations freed the Nimrod detachment for alternative roles: in mid-January, they commenced DS ASUW operations under the TACON of the US Navy Task Force 154.

This new role for the Nimrods was first discussed at a conference onboard the USS La Salle on 16 December, attended by the Nimrod Detachment Commander, Wing Commander Neal, and his designated successor, Wing Commander Andrew Wight-Boycott. The Americans proposed that, in the event of hostilities, the Nimrods should assist offensive operations in the Northern Persian Gulf by locating Iraqi fast patrol boats (FPBs), which posed a significant threat to coalition naval units. At a second conference on 9 January, the Americans reiterated their concerns about Iraqi FPBs and announced that they hoped to maintain 24-hour surface surveillance by MPA in the Northern Persian Gulf to assist with their detection and elimination. Their problem was that there were not enough P-3s to maintain continuous coverage of this area, and they duly asked for assistance with night-time surveillance from the Nimrod detachment. After careful consideration, the Air Commander approved the request five days later.

The DS role provided a rigorous test of the Nimrods' equipment and the professional competence of their crews. The area under surveillance was crowded with rigs, well heads, channel marker buoys and wrecks, which were all difficult to distinguish from small naval vessels using sensors alone – without visual confirmation. Only by careful day-to-day comparisons of the surface picture could new contacts be located. The Nimrods had then to supply regular updates on the contact's position, course and speed to allow it to be identified by the Surface Unit Combat Air Patrols (SUCAPs), using infrared equipment. Sometimes, the Nimrods also vectored the SUCAP to the contact, if it was assessed to be hostile.

The new role involved an entirely different flying routine. Within the space of 24 hours, the Nimrods were switched from low-level daytime sorties to medium-level (up to 14,000 feet) flying at night. Operating at this altitude, the Nimrods could more easily identify new surface contacts, but flight safety and self-protection were also important considerations. Initially, the Nimrods flew north-west to 28° North and confirmed their identity with coalition units in the area, before moving further north and entering a holding pattern prior to tasking. In a region crowded with air and naval forces, the greatest care had to be taken to avoid blue-on-blue

incidents. Nimrods always flew with their navigation and anti-collision lights on, and many routine flying procedures were simplified, such as the normal practice of regularly changing call signs. As the Detachment Commander recalled, 'We kept to the same call sign 'Dylan' day in day out because everyone knew that was the Nimrod.'

The first Nimrod DS mission was flown on 15 January, and a number of engagements with Iraqi naval vessels soon followed. On 21 January, a Nimrod located four contacts of interest (COIs), and provided regular situation reports on their position to a SUCAP, which subsequently engaged all the targets; next day, a Nimrod identified three fast moving contacts, tracked their progress, and then passed them on to an American P-3. On 24 January, the first sortie located an Iraqi salvage ship, which was then attacked by an American A-6.

On 30 January, the second Nimrod sortie located two COIs during a survey of the Kuwaiti and Iraqi coasts; on 4 February, Nimrods reported three new contacts and monitored the activities of two others. On 6 February, the first sortie detected and reported an Iraqi FPB, which was afterwards attacked by the SUCAP and destroyed. Two further surface vessels were destroyed by the SUCAP during the second Nimrod sortie.

On 7 February, the Nimrod operations area was extended all the way up the Gulf. Aircraft then adopted a patrolling position about 30 miles off the Kuwaiti coast opposite Faylakah Island. From here, they could track supply boats making the 'chicken run' between the island and the coast. One such vessel was located by a Nimrod and attacked by an A-6 that very day. On 10 and 11 February, Nimrods gained a total of four contacts, but none was successfully engaged by the SUCAP; on the 15th, Nimrods vectored attacking forces on to another target en route for Faylakah. On 19 and 22 February, vessels located by RAF Nimrods were again attacked by the SUCAP.

From 26 February, it was possible to reduce the sortie rate to one per day; thereafter, Nimrod operations were progressively scaled down. The final DS sortie was flown on 15 April 1991, and the last Nimrod in theatre flew back to the UK two days later.

The Nimrod Enhancement Programme

The Nimrod MR2 was equipped with an extensive range of enhancements during Operation GRANBY to improve its self-defence, communication, surveillance and navigation capabilities. Some of these were installed into the Nimrod in theatre, including Mk 12 IFF (Mode 4), frequency-agile Havequick radios, and a portable infra-red thermal imaging detection system. In the longer term, a 57-band VHF/FM marine band radio was procured to replace the existing 10-channel VHF radio, colour Searchwater was introduced, and navigation fixing problems encountered during the early stages of Operation GRANBY were solved via the installation of Navstar GPS. Link 11, providing on-screen location, identification and other details of aircraft and ships, improved co-ordination between the Nimrods and other similarly equipped elements among the coalition forces.

Together, these systems turned the Nimrod MR2 into a very much more capable asset. GPS provided an extremely accurate radar plot stabilisation, and became standard equipment for the Nimrod fleet after GRANBY. Link 11 was described as 'exceptional'. Along with Mk 12 IFF (Mode 4) and secure UHF, it eased considerably the task of integrating the Nimrods into the coalition force. Nevertheless, GPS, Link 11 and several other systems procured for GRANBY only entered service during the last two months of the operation; the majority of Nimrod sorties flew without them.

A particularly high priority was assigned to new self-defence provisions. In Operation GRANBY, the Nimrods were confronted by a far more hostile environment than they were normally accustomed to, and their potential vulnerability to both enemy action and blue-on-blue was a constant source of concern. An elaborate self-defence suite was ordered for the aircraft in September 1990, developed and tested with remarkable speed during the following months and introduced into service in January 1991.

At the beginning of the operation, the Nimrod's AN/ALE 2 chaff system was not fit for purpose. Designed to enable Vulcan bombers to lay chaff corridors, it was never intended for self-defence, and the dispensers were substantially worn out by 1990, in any case. As early as 3 September, BAe and Marconi were examining the potential for installing the Tornado's BOZ pod chaff dispenser into the Nimrod, together with a new device – the towed radar decoy. By 10 September, the MOD was considering the development of an integrated self-defence suite for the Nimrod, comprising a modified AN/ALE flare dispenser, the BOZ pod, a Marconi TRD and a Loral AN/AAR Missile Approach Warning System (MAWS). The MAWS would warn of approaching missiles and automatically activate the flare, chaff and TRD systems. But could reliable enhancements be developed in time for GRANBY? The installation of tried and trusted equipment, such as the MAWS and BOZ pod, appeared relatively straightforward, but the TRD was still highly experimental.

The MOD sought to hasten the introduction of the self-defence suite and secure the earliest possible installation of the BOZ pod. 'This would give the Nimrod MR some self-defence capability as soon as possible.' UORs covering all the equipment had been approved by the second week of October, and the modified ALE 40 flare dispenser had been tested in flight. The MAWS and the BOZ pod were successfully trialled at the end of November, although the MAWS manifested a high false alarm rate, and was only cleared subject to certain operating restrictions and modifications. The TRD was released for trials in mid-December and apparently performed as expected. Its installation was duly recommended, and the MOD afterwards claimed credit for cutting the expected production time scales by a month. The first fully modified Nimrod MR2, XV255, arrived at Seeb on 21 January 1991.

The engineering effort involved in this achievement was indeed remarkable. In just five months, the Nimrod had been re-equipped with a range of modern self-defence applications

far superior to the antiquated and ineffective chaff dispensers available at the beginning of Operation GRANBY. Nevertheless, the fact remains that for five out of little more than six months of operations in the Gulf, the Nimrods executed their tasks in a hazardous and potentially hostile environment without any effective self-defence capability. Moreover, while the MAWS/BOZ pod combination was favourably received at Seeb, XV255's TRD had a short and unhappy service history. During an early trial deployment, it was misidentified as a hostile aircraft by the Nimrod crew, who went so far as to contact a nearby ship before realising their mistake. Worse was to follow. During a night sortie on 29 January, the TRD broke away from its cable and fell into the sea. Further problems with the system – by far the most expensive part of the self-defence suite – led to all TRDs being removed from the Nimrod fleet later in 1991 pending further development work.

Nimrod Command and Control

Historically, the command and control of MPA has not always proved straightforward. MPA may, of course, contribute to air and sea operations; both air forces and navies therefore have a vested interest in their deployment. In many countries, notably in the United States, they are primarily viewed as naval assets that should operate under naval command; elsewhere, particularly in the UK, maritime air reconnaissance activity has been subordinated to air forces. Even then, however, the naval interest in MPA has invariably been recognised, and naval forces have exercised a considerable influence over their utilisation.

In the UK, the precise division of authority between the RAF and the Royal Navy has periodically been a cause of dispute. Inter-service co-operation was improved by the joint location of 18 Group and CINCFLEET headquarters at Northwood, but this very effective arrangement was unfortunately suspended at the beginning of Operation GRANBY. Foreseeing the problems that this would create, the AOC 18 Group recommended that operational control of the Nimrods should remain at Northwood. In his view, this 'would mirror normal peacetime operations which were well known, understood and practised'. Yet this contention cut little ice. Thus, it is perhaps not surprising that the familiar arguments over MPA command and control began to reappear soon after the RAF's Nimrods were committed to the MIF. They were only resolved in the final weeks of September 1990, when the GRANBY chain of command was completely reorganised.

The preliminary command and control arrangements for the Nimrod detachment, drawn up on 10 August, have already been described. Operational command was assigned to the Joint Commander, the Air Commander exercised operational control and the Detachment Commander held tactical command, with the caveat that tactical control might be delegated to CTG 321.1 or other naval forces. But this latter provision was open to two interpretations. First, as understood by the air command chain, it could mean that naval units might exercise TACON over individual MPA engaged in direct support operations while they were on task; they certainly did so, with the full agreement of the Air Commander, on numerous occasions.

Alternatively, in the view of some naval commanders, it implied that CTG 321.1 was the rightful tasking authority for the Nimrod detachment. It is not difficult to understand the frustration they must sometimes have felt working closely with a navy that commanded its own maritime air reconnaissance fleet.

The essence of the problem was that Task Group 321.1 had been operating in the Gulf for some years under the auspices of the Armilla Patrol. At the start of Operation GRANBY, the patrol immediately became part of the multi-national MIF, but was not included in the GRANBY chain of command, remaining directly responsible to CINCFLEET. This anomaly, although quickly recognised, took more than a month to resolve. In the meantime, the Nimrod detachment had to perform a precarious balancing act between the two chains of command. On the one hand, the detachment had a designated role in Operation GRANBY, which the Air Commander was determined to maintain; on the other, it was potentially subject to the TACON of CTG 321.1 under CINCFLEET.

By early September, the Royal Navy was actively promoting the argument that it should function as Nimrod tasking authority, but the potential transfer of TACON to CTG 321.1 was at first prevented by the inadequacy of communications between the Task Group and the Nimrod detachment. Increasingly, however, maritime air reconnaissance officers in both the Gulf and the UK began to question the wisdom of transferring TACON on other grounds. On 26 August, the Air Force Operations maritime staff at the MOD argued that the division of command and control between Armilla and GRANBY forces could not be maintained in the event of hostilities with Iraq: 'It surely would be preferable to have the same command and control chain for all the UK maritime assets.'

Within the Air Headquarters at Riyadh, there were more immediate concerns. As part of the UK contribution to Operation GRANBY, the Nimrod detachment could, potentially, perform a wide variety of functions in co-operation with coalition units from other countries – notably the United States. The detachment established a close working relationship with the USS Independence during the early stages of the embargo: Independence was instrumental in the development of routine operating procedures for the Nimrods following their arrival in the Gulf and they enjoyed better communications with Independence than with HMS York for several weeks. They passed all surveillance information to the American vessel as a matter of course and regularly responded to US Navy tasking requests.

In summary, the Nimrods were extremely versatile assets, capable of supporting several coalition navies at very short notice. Moreover, from 8 September, they performed these functions across a larger operational area than was served by other MPA. This was facilitated by the flexibility of the initial command and control arrangements. By contrast, it appeared that the Nimrod detachment's services might be far more narrowly confined to operations in close support of the Royal Navy's principal tasking vessel, if TACON was vested in CTG 321.1. The broader requirements of other navies might well be neglected.

The practical problems that initially prevented the transfer of TACON took longer to overcome than originally expected. HMS York spent much of her time at sea in the Persian Gulf, while the Nimrods continued to fly over the Gulf of Oman; communications between the two regions were far from reliable. With full naval agreement, TACON therefore remained with the Nimrod Detachment Commander throughout August. However, early in September, CTG 321.1 came under pressure from CINCFLEET to secure the transfer of Nimrod TACON, and duly announced his intention and readiness to do so. He was blocked by the Air Commander, who believed that the existing command arrangements were satisfactory.

Underlying this impasse lay a broader debate on Operation GRANBY command and control, which was ongoing in London and High Wycombe. During the following weeks, the pressure to establish a genuinely 'Joint' command, encompassing all three services, mounted inexorably. But the Chief of the Naval Staff (CNS) favoured the continued division of either full command or operational command between the Joint Commander and CINCFLEET, whereas the Chief of Defence Staff (CDS) was determined to see full command unified under the Joint Commander. The precise means by which this unification was to be accomplished remained unclear for some days, however, and it was at this time CTG 321.1's efforts to obtain TACON of the Nimrod detachment became particularly insistent.

Fortunately, the issue was largely resolved in mid-September. On the 13th, after a meeting of the Chiefs of Staff, CDS directed that Operational Command of all UK forces in the Gulf would be vested in the AOC-in-C Strike Command, as Joint Commander. Operational control, previously held by the Air Commander, would now belong to the newly created Joint Forces Commander, the Commander British Forces Middle East (CBFME), while tactical command of RAF units was assumed by the Air Commander. When a formal Concept of Operations for the Nimrod detachment was drawn up in October, it confirmed that TACON would be retained by the Detachment Commander, but that TACON of individual aircraft engaged in direct support operations could be delegated to the naval units concerned throughout the on-task period. The only shortcoming in this arrangement stemmed from the fact that both CTG 321.1 and the Air Commander now held tactical command of their respective units and reported directly to the CBFME. The potential therefore existed for the naval Task Group commander to raise maritime air reconnaissance matters directly with the CBFME, bypassing the Air Commander in the process. This actually happened twice during December, but did not recur thereafter. When the Nimrod detachment became involved in DS operations against the Iraqi Navy in mid-January 1991, TACON was transferred to the Commander of the US Task Group 154 with the full agreement of both the Air Commander and CTG 321.1.

The Nimrod Operations Area

The scope of the Nimrod detachment's contribution to Operation GRANBY was largely determined by the geographical area of operations to which it was assigned. To enhance the Nimrod's role, this area was almost continuously enlarged between August 1990 and February 1991. Nimrod operations were initially confined to the Gulf of Oman as far north

as the Straits of Hormuz; early in September 1990, the operations area was extended into the Southern Persian Gulf, as far north as 26.30° North; later in September, the limit was moved to the Western Persian Gulf (28° North), and the area was extended into the Northern Persian Gulf to 28.30° North at the beginning of January 1991, before reaching 29° North at the end of the month. Finally, at the beginning of February, all restrictions outside Iraqi and Kuwaiti territory and Iranian territorial waters were removed.

Careful deliberations were required before extensions were agreed. A balance had to be maintained between the operational advantages of flying further north (in terms of improved surface surveillance) and the risk posed by hostile air defences to the vulnerable Nimrod. Generally speaking, at each successive stage, the Royal Navy pressed the operational side of this argument while the RAF proved more cautious.

For the RAF, aircraft safety was the paramount consideration. Large, slow and poorly equipped for self-defence, the Nimrod would have made an easy target for hostile combat aircraft or surface-to-air missiles. But interception was by no means the only concern. As we have noted, airspace management became increasingly challenging as more and more coalition aircraft crowded into the Gulf. It took time to establish effective inter-service and coalition communications systems and operational procedures. Moreover, in determining the boundaries of the operations area, the sensitivities of nearby Gulf states had also to be respected.

Finally, the whole issue was complicated by the debate on Nimrod TACON. It is no coincidence that, while the Royal Navy was attempting to secure TACON during the first month of Operation GRANBY, it was also at loggerheads with the RAF over the north-western limit of maritime air reconnaissance operations. For all these reasons, then, the extension of the Nimrod operations area proved a difficult and controversial process.

By the final week of August 1990, the Nimrods were flying two surface surveillance sorties per day in the Gulf of Oman and had established a sound working relationship with HMS York and the USS Independence, as we have seen. However, on 28 August, the Royal Navy's Flag Officer Flotilla 2 (FOF2), who was visiting naval forces assigned to the Armilla Patrol, met the Nimrod Detachment Commander and proposed that Nimrods should support naval vessels inside the Persian Gulf. Wing Commander Neal responded that he and CTG 321.1 had agreed to restrict Nimrod operations to the Gulf of Oman for the time being.

There were no proper grounds for FOF2 to intervene in this way. Any extension of the Nimrod operations area had to be approved by the Air Commander, and this would still have been the case if TACON of the Nimrod detachment had been delegated to CTG 321.1. Such authority as the task group commander exercised over the detachment's activities stemmed only from his position as commander of naval assets in theatre, and was exercised entirely on the Air Commander's behalf. It was not the intention that officers senior to CTG 321.1 in the Armilla

command chain should influence the deployment of MPA or any other assets assigned to Operation GRANBY.

Nevertheless, the following day, FOF2 met the CTG 321.1 and persuaded him that the Nimrod operations area should be extended into the Persian Gulf. The Nimrod Detachment Commander found himself in an awkward position. While he had no desire to jeopardise relations with the Royal Navy, he believed that the Nimrods should continue to operate over the Gulf of Oman, providing 'early warning in one direction and safety net in the other', although he was 'most happy to show presence by sorties on opportunity basis, and to operate when required against any specific target or with specific tasking.' CTG 321.1 refused to accept this argument, but the Air Commander then intervened to support the Detachment Commander's position. In his view, there was no operational justification for Nimrod sorties in the Persian Gulf, especially at a time when air missions in the area were being hampered by a number of obstacles, including air traffic control and diplomatic clearance problems.

This dispute was hardly a propitious beginning to maritime air operations in the Gulf. However, the operating environment was changing rapidly and, after a face-to-face meeting with CTG 321.1 on the morning of 5 September, the Air Commander signified that he was not merely willing but 'very keen that Nimrods carry out PG area familiarisation to demonstrate operational capability and prove co-operation procedures.' The documents provide no explanation for this abrupt volte face, but the incident demonstrated how apparently major disputes could be overcome quite easily through informal discussion. What was lacking, at this stage, was adequate consultative machinery, nor had Task Group 321.1 and the Nimrod detachment been properly integrated into the GRANBY chain of command.

Despite his initial reservations, the Nimrod Detachment Commander welcomed the move of one daily sortie into the Persian Gulf, as the Gulf of Oman was becoming increasingly crowded by the second week of September. But the new northern flying limit, 26.30° N, itself soon proved inadequate. On 19 September, the Detachment Commander asked for an extension to 27.30° N to track a group of Iraqi tankers in the Northern Persian Gulf, and a similar request was received from Task Group 321.1 the following day. As the area was protected by continuous Combat Air Patrol (CAP) and AWACS cover, permission was immediately granted. A further extension to 28° N quickly followed for Royal Navy vessels, and the same provision was made for the Nimrods to ensure that MPA support could be made available for naval forces if necessary, subject to further measures 'to ensure 100% safe operations'.

The operations area remained unchanged for the next two months. Any move beyond 28° N would have implied the violation of an Iraqi exclusion zone beginning at 28.20° N, and seemed certain to encounter opposition. So it was not until December that the debate was renewed by the new CTG 321.1, who requested Nimrod coverage up to 28.30° N – the same latitude as Kuwait's southern border. The Air Headquarters hesitated once again, and then approved the

extension only if 'there was a specific task to do and specific and dedicated defensive measures were taken in support of the Nimrod'.

CTG 321.1 then decided to bypass the Air Headquarters and approach the CBFME directly. Further extensive deliberations followed, after which the proposal was referred right back to the MOD. No decision had been reached when, on 14 December, the Royal Navy requested permission for the Nimrods to loiter at the very limit of their operations area to collect data on Iraqi mining activities in the Northern Persian Gulf. This was strongly opposed by the air command chain because, to be of any value, such missions would have had to be flown continuously – an impossible task with the available resources. It was also doubted that the operational benefits would outweigh the increased risks.

The US Navy then intervened. It was on 16 December that they first asked for Nimrod Direct Support against Iraqi FPBs in the Northern Persian Gulf. The Detachment Commander and his designated successor were eager to secure this new role for the Nimrods, but recognised that clearance would be required to fly up to 28.30° N. The American plan brought both the detachment and the Air Headquarters closer to the Royal Navy and the Joint Forces Headquarters (JFHQ), but no general expansion of the operations area was granted by the MOD until 1 January. Even then, any missions north of 28° N had to be approved by the BFCME, a problematic stipulation as the American plan necessitated a 24-hour MPA presence up to 28.30° N.

On 7 January, the Nimrod Detachment Commander proposed that a daily sortie be mounted up to 28.30°, a somewhat liberal interpretation of the MOD's ruling that the Air Commander felt compelled to challenge. 'This will only proceed with my specific authority – which should be sought a day or so beforehand,' he insisted. Even the commencement of Nimrod DS operations did not at first persuade him to alter his stance, as he believed that the information collected at 28.30° N would be only 'marginally better than that collected at 2800N'. He would only approve Nimrod missions north of 28° N on a case-by-case basis and with the assurance of dedicated support from EP-3 electronic intelligence aircraft and a CAP. General authorisation for such missions was not granted until 18 January.

History soon repeated itself. The first sortie to fly in the DS role was asked by a British naval vessel to fly to 29° N to make a visual identification of a radar contact; quite correctly, the Nimrod crew refused, but the Royal Navy afterwards protested strongly: 'If crew not prepared to go to 29N and visually identify contacts, they are no use and will not be tasked or required.' A large part of the problem stemmed from the fact that American P-3s had been authorised to fly up to 29.30° N with CAP cover. The Royal Navy may have assumed that the Nimrod operations area had been extended to the same latitude. As further difficulties appeared likely unless Nimrod and P-3 missions were brought into closer alignment, the AHQ agreed to sanction Nimrod sorties up to 29° N, subject to the conditions already laid down. Time spent north of this latitude was to be kept to a minimum, and positive control by an Air Control Unit (ACU) was to be maintained at all times.

After the outbreak of hostilities and the rapid collapse of Iraq's air defences, the extension of CAPs to the Gulf's most northerly extremes enabled MPA to fly beyond 29° N, and the Americans eventually decided that their P-3s should 'go all the way up'. Again, the Nimrod operations area was similarly enlarged to encompass 'the entire Arabian Gulf north of 2830N', although aircraft were to remain clear of Iraqi and Kuwaiti territory, and of Iranian territorial waters.

Diplomatic Clearance for Nimrod Operations

In 1990, the UK's maritime air reconnaissance effort was largely focused on the North Sea and the North Atlantic – a very open operating environment, where diplomatic clearance ('dipclear') created few difficulties. Even in more enclosed theatres, such as the Mediterranean and the Gulf, obtaining clearance for overflight was usually a straightforward matter provided that the necessary formalities were respected. However, the dipclear issue proved very much more complicated during the Gulf conflict.

A minority of Gulf states, notably Iran, detached themselves from the impending conflict and declared their determination to maintain the integrity of their territorial waters and airspace. Dipclear problems with such countries were expected. There were no diplomatic relations between the UK and Iran in 1990, and the Iranians had also protested periodically about alleged violations of their airspace by Nimrods involved in Operation MAGIC ROUNDABOUT. Iranian territorial waters imposed their own constraints on the Nimrod operations area, but Iran had also created a so-called 'advisory zone' (IAZ), extending further into the Gulf, the status of which was uncertain. Permission to fly inside the IAZ was sought through the medium of the Iranian mission to the UN in New York, and was duly received, but the MOD imposed a buffer zone of three NM outside Iranian territorial waters, which was out of bounds for Nimrod missions. In time, the Air Headquarters became concerned that this was restricting the scope for monitoring suspect merchant vessels close to Iran, and requested permission for the Nimrods to operate up to the limit of Iranian territorial waters. However, after discussions between the MOD and the Foreign Office, the request was denied. It was considered that the benefits of flying inside the buffer zone would be outweighed by the increased danger of infringing Iranian airspace. In short, overflight problems with Iran were predicted, and operations were directed with the aim of minimising the potential for friction.

Far more surprising was the fact that certain coalition members, particularly the UAE, were also sometimes less than co-operative. Elements within the UAE political and military hierarchy apparently believed it was necessary to make periodic 'gestures' to coalition forces to emphasise their country's sovereign status, involving both rigid enforcement of, and marked departures from, established dipclear practice. As the UAE lies directly between Seeb and the Persian Gulf, this created a major source of difficulty for the Nimrod detachment. Without dipclear to transit through UAE airspace, Nimrod Persian Gulf sorties had to fly via the Straits of Hormuz, taking longer and consuming more fuel. Moreover, UAE

restrictions had the potential to prevent Nimrod surveillance of important areas of the Kuwaiti coast.

The first threat of UAE obstruction, involving two Mirage fighters, has already been described. On 1 September, a Nimrod operating over the Gulf of Oman was challenged by UAE ATC and told to remain at least 25 NM clear of the UAE coast; operations to within 6 NM had previously been flown. No explanation was readily forthcoming. The operational implications of the 25 NM restriction were serious: Nimrods would be prevented from monitoring shipping movements around the Fujairah tanker park, near the UAE coast, where several Kuwaiti tankers had previously been identified. The British Military Attaché in Abu Dhabi was asked to raise the issue with the UAE authorities immediately. Nevertheless, airborne Nimrods encountered further problems on 2 and 6 September.

There was renewed friction on 8 September, when Nimrod missions began over the Persian Gulf. Dipclear to transit over the UAE was obtained but then withdrawn by UAE ATC, acting under military direction; the aircraft subsequently flew via the Straits of Hormuz. After bilateral discussions, procedure was changed, the Nimrod detachment being directed to file flight plans and request dipclear at least 24 hours in advance. This stipulation was not welcomed by the Detachment Commander, as it promised to present a major obstacle to short-notice tasking, but provision was made for 'crisis' warnings, which only required three hours notice, and 'VIP' warnings requiring only one hour. An aircraft movement notification system was introduced, whereby RAF detachments would fax their flight details to the UAE Joint Operations Centre at Abu Dhabi.

Initially, the new system failed. Nimrod transits were blocked on 13 and 15 September, the aircraft movement notification system was suspended and the detachment was told to 'revert to full dipclear requests'. Over the following days, Nimrod missions were 'severely hampered by inability to arrange UAE dipclear at short notice', and UAE representatives even demanded access to Nimrod mission reports and proposed that a UAE serviceman should fly in all Nimrods transiting through UAE airspace.

Ultimately, the impasse was substantially overcome through the deployment of an ATC-qualified RAF liaison officer to the UAE. After his arrival, it quickly emerged that the more intrusive UAE proposals had been part of an entirely separate series of discussions, and were not preconditions for dipclear, and the focus then returned to the fax-based aircraft movement notification system, which was finally made to work. For urgent operational needs, it was agreed that the clearance process could be initiated by a simple telephone call from the detachment to the RAF liaison officer in the UAE, stating call signs, route, entry and exit points and times. 'UAE authorities appear to have gained confidence in system and a rapport exists,' the RAF liaison officer signalled on 26 November, but he acknowledged at the same time how important it had been to introduce the 'human element' into the dipclear system. 'The bottom line,' he wrote, 'is [that] if I don't know then they won't know and they will turn you away.'

Although this problem was effectively dealt with, the Nimrods were still forbidden to overfly UAE territorial waters, so that the dispositions of at least some merchant shipping lay beyond their powers of surveillance. Early in December, permission was sought to fly up to 3 NM from the UAE coast. No response is recorded, but the Persian Gulf mission was prevented from operating within 12 NM of the coast on 8, 9 and 10 December. A mission to within 3 NM of the coast was approved on 22 December but the 12 NM restriction was applied again on the 30th. Personal differences or jurisdictional disputes within the UAE government and armed services were probably responsible; diplomatic pressure from the UK could only provide part of the solution. Fortunately, the issue lost much of its importance when MIF operations ceased, and the Nimrods were transferred to the DS role.

Conclusions

Throughout Operation GRANBY, the RAF's Nimrod MR2 detachment was confronted by a series of unforeseen and unfamiliar challenges. These stemmed less from the basic tasking to which the Nimrods were assigned than from the operating environment. The Nimrod force was well prepared for surface surveillance, SAR and DS duties, but not as part of complex coalition operations conducted far out of area, over enclosed seas bordered by enemy and neutral states.

The MIF task was particularly difficult due to the absence of planning and preparation and the peculiarities of the Gulf theatre. Virtually every aspect of the Nimrod MR2 mission had to be determined in an ad hoc fashion at the tactical level. It is to the credit of the Nimrod crews that they were rarely to blame when the established procedures broke down, as they did on several occasions during the first two months of the embargo against Iraq. Happily, by October, these teething troubles had largely been overcome, and their impact was limited, in any case. Iraqi ocean-bound trade was very soon brought to a complete standstill. If the DS task proved more straightforward, this was chiefly because, by January 1991, the Nimrods were far more familiar with the distinctive demands of Gulf operations.

The difference between the Nimrod MR2's mission in the NATO area during the 1980s and its tasking during Operation GRANBY is also reflected in other parts of this study. The demands of the Gulf theatre were such that the Nimrod required extensive enhancements, but fully modified aircraft only became available after the start of DS operations, and some new equipment proved defective. To this extent, the Nimrod enhancement programme provides an illustration of the importance of long-term planning in procurement policy. New equipment takes too long to develop for acquisition to be dictated by very short-term operational requirements. Such an approach may not produce dividends in time to affect the outcome of a war of brief duration, and attempts to accelerate the production timetable by cutting corners or pressing contractors can inflate costs and reduce the utility of the end product.

Further problems were raised by command and control, the expansion of the Nimrod operations area, and by overflight restrictions. Normal peacetime command arrangements

could not cater for the Gulf crisis, but they were initially replaced by dual structures that left both JHQ and CINCFLEET in command of deployed force elements. Consequently, there was scope for the Nimrod detachment to be removed entirely from the GRANBY command chain, a course that appealed to senior naval officers after the normal channels of naval influence over maritime air operations were suspended. The resulting dispute over Nimrod TACON was only settled when all Gulf units were placed under the command of JHQ.

Where the operations area was concerned, although RAF maritime air reconnaissance squadrons were naturally accustomed to working with the Royal Navy, they rarely did so in environments where there was a significant threat to the Nimrod. In these new circumstances, the different concerns of the two services were exposed all too clearly. Responsible both for conducting operations and safeguarding, in the Nimrod detachment, a very valuable but vulnerable asset, the RAF refused to extend the operations area without carefully considering the risks involved. By contrast, naval support for extension was based overwhelmingly on the operational advantages that were expected to accrue. The various disputes, although ultimately resolved, demonstrated that there was still a need for improved dialogue between the two services, especially when joint operations were launched at short notice in unfamiliar theatres.

Then, finally, there was the dipclear issue. Again, while this had rarely impacted upon maritime air reconnaissance activity in the NATO area, GRANBY demonstrated that overflight restrictions could impose significant operational constraints, and suggested that dipclear would require far more careful consideration if RAF detachments were to deploy out of area in future.

In summary, there were many lessons for the Nimrod MR2 force to learn from Operation GRANBY. Nevertheless, in the light of the numerous obstacles that confronted the Seeb Nimrod detachment, their achievement appears all the more impressive. Throughout, the three deployed aircraft maintained a flying rate of around 60 sorties per month. During the MIF phase, they challenged no fewer than 6,325 ships; in the DS period, they mounted 85 sorties and participated in actions against 15 Iraqi vessels. After operations ceased, the CTG 154.3, US Navy Admiral R.J. Zlatoper offered the following assessment:

Your entire organisation's performance was exemplary and contributed directly to the destruction of the Iraqi Navy. Your aircrews' expertise and professionalism in employing the Nimrod to detect and track hostile surface contacts resulted in numerous engagements of Iraqi vessels. The high tempo of operations maintained by Nimdet Seeb would not have been possible without an outstanding maintenance effort. Your extraordinary performance during Operation DESERT STORM was a reflection of total team effort by all Nimdet personnel.

¹ This study is based on the Air Historical Branch narrative, *The Royal Air Force in Operation Granby: Maritime Air Reconnaissance Operations*, prepared by AHB1.

Evolution, not Revolution? Some Thoughts on Desert Storm and the RMA Debate

By Squadron Leader Andrew Green

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Abstract: Even now, more than 25 years after the outbreak of Gulf War One, the debate as to the degree to which that war embodied a revolution in air power persists. This paper examines whether Operation DESERT STORM was truly a revolution in Air Power and, having concluded that when viewed alone it was not, further considers the notion that DESERT STORM may have been a nascent development in a far broader, still on-going revolution.

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Introduction

Commencing at 0240hrs on 17 January 1991, 2,775 aircraft sorties were launched during the first 24 hours of Operation DESERT STORM;¹ Iraq was both subject to the opening blows of a wide-ranging air attack and witness to a lucid demonstration of air power's ability to strike with new-found precision. In the eyes of a watching public, only recently furnished with round-the-clock news coverage, the air offensive would have appeared so vastly different to anything previously observed that drawing a conclusion of revolution would have been almost irresistible. In the 25 years since DESERT STORM, a number of commentators have supported that initial perception that this was indeed a revolution in military affairs; however, perhaps yet more have renounced that notion, suggesting instead that this was simply the culmination of ongoing evolution.²

Albeit limited in its ambition, this short article will attempt to analyse the facets of DESERT STORM which most convincingly lay claim to the accolade of being revolution in military affairs (RMA). To this end, it will assess where this Operation fits within the genesis of revolutions and will finally examine the notion of an ongoing societal revolution in order to offer some thoughts as to whether DESERT STORM represented an evolution or a revolution in air power, if not military affairs as a whole. It concludes by proposing that Operation DESERT STORM cannot presently be categorised as a revolution, but that it may eventually be considered a contributing element of an as yet-to-be-fulfilled revolution in air power, as well as being a small symptom of a current, far broader revolution in western society.

It is important to consider what is meant by an RMA before embarking upon an examination of DESERT STORM as a possible exemplar. This is a complex task; as Crane Britton suggests, 'revolution' has become a synonym for almost any change and has perhaps retained only a hint of abruptness or significance.³ Moreover, analysts have already identified (conservatively) 3 different types of revolution in the military sphere including: the grandiose Military Revolution, the narrower Military-Technical Revolution and the more contemporary, often DESERT STORM associated, Revolution in Military Affairs.⁴ Whilst it may appear that having at least 3 types of revolution from which to pick is a blessing, it is in fact a curse as, where agreed amongst academics, each comes with its own numerous and specific criterion which if utilised would unnecessarily bind the scope of our considerations here. Consequently, those 3 benchmarks are aside here, and revolution will be seen through the simpler definition of "A dramatic and wide-reaching change in conditions, attitudes, or operation."⁵ Logically, any change which falls short of revolution is inherently evolutionary, a rather less contentious concept.

First then, we must establish which air power aspects of DESERT STORM demonstrated the most dramatic and wide-reaching changes. Richard P. Hallion lists only training, technology and doctrine under the subtitle "What Worked" whilst Keaney and Cohen, when considering the degree to which DESERT STORM was a revolution, list 5 technological advances ahead of any other area of consideration, only later including doctrine and even then weaving yet more forms of technology into their text.⁶ Accordingly, whilst air power's relaunch on the world's

stage contained strong turns from a number of performers, doctrine and technology were ostensibly the stars of the show. Do they pass the revolution test?

Now familiar to air power students worldwide, in 1988 Colonel John A Warden theorised that each nation-state draws its power from 5 concentrically-depicted centres of gravity, with strikes against the outer rings lower impact but relatively easy to achieve, conversely strikes against the centre high impact but significantly harder to achieve and the potential that substantial effect anywhere may reverberate through the entire system.⁷ By combining this notion with excellent target information and awareness of the previous 20 years' technological advancements (which had apparently eluded US Tactical Air Command planners), Warden presented various Commanders with a plan which would "cripple Iraq's military" or in a different parlance, achieve strategic paralysis.⁸ Whilst the tactical specifics did not play out as Warden and his colleagues in the 'Checkmate' planning cell had envisaged (indeed, the detail of their Instant Thunder plan was not taken forward),⁹ his thinking and in particular his Five Strategic Rings did underpin the subsequent air plan. His work, which effectively provided the intellectual component to the air campaign's fighting power, was considered by some to be genuinely ground-breaking and even recent observers have apportioned an appearance of revolution with one describing the rings concept as "a fundamental change in aerial operations" however, there is certainly evidence which more clearly supports the notion of an evolution in doctrine.¹⁰

Whilst Warden's 5 rings (leadership, system essentials, infrastructure, population and fielded forces) have been heralded as new, it is worth noting – as Warden himself would be first to recognise – that in 1921, Giulio Douhet had already suggested 5 very similar basic target sets in *Command of the Air*: industry, transport, infrastructure, communications and the will of the people.¹¹ Douhet even identified the need for precision in order to target those elements by suggesting that they should be destroyed "in one pass."¹² Additionally, numerous warfare theorists had previously suggested that preventing an enemy from functioning would be a highly-desirable objective during conflict. In 1928, J F C Fuller proposed the notion of "Strategic Paralysis as the Objective of the Decisive Attack" and yet further, in 1954 Capt Sir Basil Liddell Hart opined "A strategist should think in terms of paralysis, not killing... so that the sword drops from a paralysed hand."¹³ It must therefore be considered that although timely and well packaged for an embryonic PowerPoint generation, as almost every aspect of Warden's 'new' idea had already been prophesied, this was not truly a revolution. It might even be said that it was not really an evolution but more a case of repetition designed to bring about reinvigoration in conceptual thought.¹⁴

If the doctrine which underpinned the air campaign was not revolutionary, the technology which finally enabled the prosecution of strategic paralysis certainly lays greater claim to being so. Stealth/Low Observable (LO) aircraft dropping Precision Guided Munitions (PGMs) and Cruise Missiles destroying buildings (with fascinated media coverage establishing the popular idea that these weapons entered through specific windows of a target building) are

perhaps the defining images of that war and therefore immediately feature when considering revolutionary technology which featured in DESERT STORM. Yet more technologies did not debut here however, remembering that the chosen definition of revolution caters for a wide-ranging change in operations and given the vast increase in their utilisation, they might also be considered: the High-speed Anti-Radiation Missile (HARM), Air to Air Refuelling, the secret communications-providing Secure Telephone Unit mark 3 (STU-III) and air and space-based Information Surveillance and Reconnaissance (ISR) systems had all been used before.¹⁵ Notwithstanding their sizable respective contributions, for the purposes of the contention here, we will focus upon the one technology with perhaps the strongest revolutionary credentials: Stealth/LO design.

The art of creating a LO platform, achieved by reducing its Radar Cross-Section (RCS) such that it can operate closer to a detection system than a conventional platform, helped enable the prosecution of targets which might have otherwise remained unstruck.¹⁶ That the F-117A Nighthawk attacked 40% of strategic targets (including key air defence, leadership and communications objectives) in spite of accounting for just 2% of the total sorties flown clearly illustrates the degree to which, in spite of initial uncertainty and a lack of confidence at the highest levels, LO technology became a vital part of the air campaign.¹⁷ These systems were not able to deliver novel or massive ordnance, nor were they sufficient in number to strike in stunning waves however, their effective invisibility allowed surprise to be re-introduced within the air domain, would have conveyed considerable influence through psychological effect and, through their ability to attrite the Iraqi air defence network with almost absolute impunity, they reduced the extent to which other coalition aircraft could be observed and therefore vastly enhanced the coalition's degree of control of the air.¹⁸

The introduction of this technology proved so successful that post conflict some suggested that the USAF would never again be able to justify the purchase of aircraft which "do not incorporate low observables";¹⁹ given that the 3 major additions to the USAF's manned fighter/bomber inventory made during the intervening period (the B-2 Spirit, F-22 Raptor and F-35 Lightning II) have embodied this innovation, it would appear the USAF hierarchy may have shared the belief that "stealth...best exemplified the new revolution in aerospace power made possible by advanced technology."²⁰ Notwithstanding the above however, when LO technology's dramatic effect is isolated from other abetting factors applicable in DESERT STORM (including good threat and target information, enabling basing options, unrestricted operating terrain, vastly improved US-Russia relations and poor Iraqi use of their own not inconsequential air power) and evidence of a dramatic change in conditions, attitudes or operations sought, even this most highly-acclaimed progression falls short of revolution.²¹

That 8 distinct targets could be struck by 4 independently operating, LO-enabled F-117A aircraft when a package of up to 37 conventional aircraft would have been required to do so is impressive.²² However, this reduction in numbers does not inherently represent a revolution when applied against the given definition. First, the advent of stealth technology did not

extensively change the conditions in which air power was delivered and indeed, by requiring to fly exclusively at night so as to maintain their 'cloak', the F-117A perhaps imposed more conditions on the utilisation of air power than those by which previous Commanders had been bound. Second, this technology did not initiate wholesale changes in the operation of aircraft; the Nighthawk was utilised in Attack and Control of the Air roles just as conventional aircraft had previously been, were during this conflict and would continue to be so.²³ Third, this capability did not significantly alter attitudes to the utilisation of air power, save for reinforcing the ever-developing perception that cutting-edge air power can be utilised in more greatly contested environments or in familiar threat environments at lower risk.²⁴ Given the above, though incredibly successful, LO technology cannot be considered revolutionary and, as this was identified as the best technological candidate for confirmation as revolutionary, it follows that no element of technological improvement will be considered as such.

Overall, neither the doctrinal nor technical contributions to DESERT STORM are found to have the hallmarks of a revolution and if none of the constituent parts are revolutionary, it should follow that the Operation was not so. Nonetheless, it is clear that there is much literature and online material which suggests that many still believe this to have been a revolution of some sort. In spite of the above findings, it is quite possible to empathise with that viewpoint. One explanation for this 'feel' may be that, as suggested by former head of the House Armed Services Committee Les Aspin, this war represented the first occasion upon which the major equipment worked as planned and the utilisation of that equipment was so exceedingly well orchestrated that the total was greater than the combination of its parts.²⁵ Whilst this viewpoint offers some justification, it still does not fully explain the sense of revolution which proliferates; perhaps a wider perspective is required to achieve clearer focus.

Alvin Toffler proposed that the history of civilisation can be divided into 3 phases: the first followed the agricultural revolution, the second stemmed from the industrial revolution and the third, into which we are now transitioning, is derived from an information revolution.²⁶ Each new wave shatters the political, social and economic patterns which defined the previous and whilst the first 2 revolutions are generally familiar, the third-listed information revolution, though it surrounds us every day, is somehow less so. In a more recent publication, the Tofflers tied forms and indeed examples of warfare to the earlier suggested waves, citing the American Civil war as the last of the agricultural-wave wars, the World Wars as specimens of industrial-wave wars and the first Gulf War as one of the first information-wave wars.²⁷

When examining the suggested information wave and the war which they tied to that paradigm, there appears to be a strong degree of coherence. Toffler detailed that civilisations in this new age would be born of 2 major driving factors, the rise of new industries based on scientific innovations and the power of computing, and that 4 specific fields of commerce would witness the greatest advances: electronics and computing, space, undersea and genetics.²⁸ Whilst the maritime industry has perhaps not developed as suggested and the genetics industry has to date had no significant impact on the conduct of warfare, Toffler's

suggestion of great advances in computing and space have certainly been realised and those advances contributed significantly to the successes of DESERT STORM.²⁹ Accordingly, whilst it has been established that air power in the first Gulf War was not itself a revolution, it may be that this was a nascent development in the still ongoing, far broader, third-age revolution however, the degree of confidence in and future utility of this quasi-conclusion must be explored further.

First, and with regard to confidence, it is feasible to suggest that the technological advancements discussed during this piece were not as a result of a third-wave revolution but more simply derived from the enabling societal mechanisms found in the nations which contributed to DESERT STORM's success. Illustratively but not exhaustively, the USA's highly-educated population, significant spending on defence (in particular on R&D) and tight controls designed to protect intellectual property and transfer of technology certainly helped facilitate success in this air war³⁰ however, such enabling factors only deliver a marginal advantage outside of a Toffler-esque, broader revolution. Accordingly, the significant technological advantage attained by Western nations in the years preceding DESERT STORM supports the notion that the third-wave revolution was, and indeed is, underway.

Second, with regard to utility and as suggested in War and Anti-War, one nation may experience a transition in civilisation and warfare whilst other nations and organisations may not. As all waves of warfare may therefore exist in parallel, a third-wave nation might paradoxically struggle to defeat an enemy who remains firmly entrenched in the first.³¹ To illustrate, consider the recent intervention in Afghanistan where, should the coalition militaries have been less advanced, Close Air Support (CAS) may have been provided cheaply and effectively by a light turbo-prop aircraft³² such as the A-29 SuperTucano currently being delivered to the Afghan Air Force. Instead, short endurance, costly to operate and logistically hungry advanced multi-role aircraft such as the F/A-18 and F-16 were often used, clearly demonstrating the way in which a nation significantly more advanced than its enemies may be able utilise only a small proportion of its high-technology, high-cost but low-numbered systems' vast capabilities and yet further hinting that high-end technology is not easily warfare-wave backwards compatible. Perceived advantages may be disadvantageous. Moreover, whether fighting a conventional peer or an asymmetric insurgency (as may continue to be the trend),³³ Maj Gen Vladimir Slipchenko's claim that "High technology becomes pivotal only when it exists in enough numbers to make its influence felt" rings true.³⁴ If the increase in quality associated with an advance in warfare is accompanied by an equivocal or greater decrease in quantity, no genuine advance has been made and indeed a retrograde may have occurred.

Finally, returning to confidence, as they might strive to ensure the evidence supports their view and as they are not blessed with a wide or distant perspective, those living through a potential revolution (including the author of this piece) are perhaps poorly placed to objectively assess if that is indeed the case. Only when those judging with the benefit of hindsight assess this

period to have seen sufficient development so as to have been a societal revolution can it truly be known if DESERT STORM was indeed an early part of that wider revolution. Should Toffler's third wave stall and future generations assess no dramatic or wide-reaching change in society at large (and air power by association) to have occurred, this article's explanation for DESERT STORM's revolutionary 'feel' will be proven invalid and that Operation, with each constituent part failing the revolution test, will forevermore be consigned to the supposed ingloriousness of mere evolution.

In conclusion, this short piece has explored the concept of revolution, assessed the facets of air power which demonstrated the greatest degree of change during Operation DESERT STORM and has found no individual element to have undergone sufficiently significant or wide-ranging change for the Operation to be declared a revolution when measured against a broadly-accepted definition of the term. Furthermore, in spite of no individual element being revolutionary, it may be that DESERT STORM carries an air of revolution both because it was so well co-ordinated so as to be greater than the sum of its parts and, more broadly - and carrying greater weight - as it perhaps serves as an early expression of wider advancements derived from Western society's transition into an information age. Finally, aligned with the essence of Zhou Enlai's (albeit misrepresented) view that even 2 centuries later it was still too early to assess the impact of the French Revolution, so only in the fullness of time will this article's assertions be proven or disproven.³⁵

In the interim, and irrespective of the degree to which DESERT STORM's advances were revolutionary, politicians and Commanders, perhaps seduced by the promise of low-risk, quick-win wars, will continue to pursue, purchase and field high technology aircraft which, with almost exponentially rising price tags, may only buy out the capability gap left gaping by reducing asset numbers (which itself stems from that rising unit cost). The risks this ouroboros cycle poses (ever fewer eggs in yet fewer baskets) may be intolerable to some but, as the platforms' rise in demand for mission management attention continues to outstrip the supply afforded by a human's limited capacity, so that human will increasingly require augmentation. Fourth generation aircraft did much to reduce the capacity drain of actually having to fly the aircraft placed upon a pilot,³⁶ fifth generation aircraft will utilise intelligent sensor fusion to aid decision making³⁷ and perhaps sixth or seventh generation aircraft will see the human-in-the-loop finally cede to a fully Artificial Intelligence (AI) controlled platform, releasing autonomous weapons³⁸ according to a strategy devised and microworld-tested with the assistance of modular AI.³⁹ Should this level of automation in the delivery of air power be achieved then the information-wave warfare revolution will be complete, the risks taken in the continual drive towards high technology will have been justified and this (by then far-distant) campaign will have been vindicated as the first overtures of a revolution which may have altered not just the character of air war but, by potentially breaking the societal link between the people and their air force, perhaps its very nature.

Notes

¹ Tom Clancy and Chuck Horner, *Every Man a Tiger* (New York: Putnam Publishing Group, 1999), 343.

² Defence Dept, *Conduct of the Persian Gulf Conflict: An Interim Report to Congress, July 1991* (United States: United States Government Printing, 1991), 164 Thomas A. Keaney and Eliot A. Cohen, *Revolution in Warfare? Air Power in the Persian Gulf* (United States: Naval Institute Press, 1995), 199 – 201.

³ Crane Brinton, *Anatomy of a Revolution* (New York: Random House, 1965), 3.

⁴ For further exploration of these notions see: Colin S. Gray and Williamson Murray, *Strategy for Chaos: Revolutions in Military Affairs and the Evidence of History* (London: Frank Cass Publishers, 2002).

⁵ *Oxford Dictionary* (Oxford University Press, 2016), s.v 'Revolution' by Oxford, accessed March 17, 2016, <http://www.oxforddictionaries.com/definition/english/revolution>.

⁶ Keaney and Cohen, *Revolution in Warfare?*, 188-212.

⁷ Richard P. Hallion, *Storm over Iraq: Air Power and the Gulf War* (Washington, DC: Smithsonian Institution Press, 1992), 242 – 243.

⁷ Keaney and Cohen, *Revolution in Warfare?*, 188-212. John A Warden et al., *The Air Campaign: Planning for Combat* (San Jose: iUniverse, 1998).

⁸ Clancy and Horner, *Every Man a Tiger*, 258.; Williamson Murray and Robert H. Scales, and Harvard University Press, *The Iraq War: An Elusive Victory* (Cambridge, MA: Harvard University Press, 2005), 158 Norman H Schwarzkopf and Peter P Written, *It Doesn't Take a Hero: The Autobiography of General H. Norman Schwarzkopf* (New York: Bantam Dell Pub Group, 1992), 318.

⁹ Clancy and Horner, *Every Man a Tiger*, 359-265.

¹⁰ Clayton KS Chun, *The U.S. Army War College Guide to National Security Issues*, 4th ed. (Carlisle, PA: Strategic Studies Institute, U.S. Army War College, 2010), 296.

¹¹ Giulio Douhet, *The Command of the Air* (New York: Arno Press Inc., 1942), 50.

¹² *Ibid.*, 20.

¹³ J F C Fuller, *On Future Warfare* (London: Sifton Praeed, 1928); Basil Liddell Hart, *Strategy*, 2nd ed. (New York, N.Y., U.S.A.: Penguin Group (USA), 1991).

¹⁴ On the subject of Warden's contribution to regenerating conceptual thought, see John A Olsen, *John Warden and the Renaissance of American Air Power* (Washington DC: Potomac Books, 2007)

¹⁵ Keaney and Cohen, *Revolution in Warfare?*, 189-199 and Clancy and Horner, *Every Man a Tiger*, 335.

¹⁶ Keaney and Cohen, *Revolution in Warfare?*, 190.

¹⁷ The F-117A was not the only LO-enabled attack capability, a combined 323 Tomahawk Land Attack Missile (TLAM) and Conventional Air-Launched Cruise Missile (CALCM) also struck strategic targets; Thomas A Keaney and Eliot A. Cohen, *Gulf War Air Power Survey Appendix T 'Performance of Selected Weapons Systems'* (Washington, D.C.: U.S. G.P.O., Supt. of Docs., 1993); Benjamin S. Lambeth, *The Winning of Air Supremacy in Operation DESERT STORM*, (Santa Monica, CA: Rand, 1993), <https://www.rand.org/content/dam/rand/pubs/papers/2009/P7837.pdf>, 10.

¹⁸ Keaney and Cohen, *Revolution in Warfare?*, 190.

¹⁹ Lambeth, *Air Supremacy in Operation DESERT STORM*, 10.

²⁰ Hallion, *Storm over Iraq*, caption for final picture prior to page 243.

²¹ Lambeth, *Air Supremacy in Operation DESERT STORM*, 8.

²² Benjamin S. Lambeth, *Speech to Zhukovskii Engineering Academy, Moscow*, (n.p., 1992).

²³ Colin S. Gray and Williamson Murray, *Strategy for Chaos: Revolutions in Military Affairs and the Evidence of History* (London: Frank Cass Publishers, 2002), 31; DCDC, *JDP 0-30*, 3-1.; Or indeed in the "Air Bombardment" and "Neutralisation of Enemy Air Forces" roles, which were defined in AP1300 as early as 1928.

²⁴ It is reduced risk which perhaps best explains why 'stealth' technology has so captivated governments, Commanders and air power proponents worldwide. LO technology was the latest military-industrial complex instalment of the countermeasure (or counter-countermeasure, continue ad infinitum) but came at a time when tolerance to the loss of military lives on foreign soil had significantly reduced. Accordingly, 'stealth' was an answer which helped re-defined a different question.

²⁵ Benjamin S. Lambeth, 'The Desert - A New Assessment', *JFQ* Winter 2000-2001 (2000), accessed April 6, 2016, <http://www.dtic.mil/dtic/tr/fulltext/u2/a426732.pdf>, 34.

²⁶ Alvin Toffler, *The Third Wave: The Classic Study of Tomorrow* (New York: Bantam Press, 1984).

²⁷ Alvin Toffler and Heidi Toffler, *War and Anti-War: Making Sense of Today's Global Chaos* (New York: Warner Books, 1995), 3.

²⁸ Toffler, *The Third Wave*, 129.

²⁹ Defense Dept, *Conduct of the Persian Gulf War: Report to Congress*, (United States: United States Government Printing, 1992), XII.

³⁰ Clearly, the notion of societal support to military technological advancements is not limited to the USA. For examples of how other nations developed their technology before and during Operation DESERT STORM see Hallion, *Storm over Iraq*, 243.

³¹ Toffler and Toffler, *War and Anti-War*. For a clear illustration depicting the parallel waves of warfare see Robert J. Bunker, 'Tofflerian Paradox', *Military Review*, May-Jun 1995 (1995), accessed April 9, 2016, http://scholarship.claremont.edu/cgi/viewcontent.cgi?article=1132&context=cgu_fac_pub, 100.

³² Stephen Trimble, *Irregular Warfare Offers New Role for Propeller Driven Aircraft*, October 26, 2010, accessed April 14, 2016, <https://www.flightglobal.com/news/articles/irregular-warfare-offers-new-role-for-propeller-driven-348848/>.

³³ DCDC, *Global Strategic Trends out to 2045*, (Shrivenham, Wilts: DCDC, 2014), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/348164/20140821_DCDC_GST_5_Web_Secured.pdf, xiii.

³⁴ Lambeth, *Air Supremacy in Operation DESERT STORM*, 15.

³⁵ Zhou believed the question he had been asked related to the French Students' riots which occurred only 3 years earlier but, as the misunderstanding was "too delicious to invite correction" and as the sentiment stands, it was never corrected and has now entered wide speared use as a prosaism. For further information see Richard McGregor, 'Zhou's Cryptic Caution Lost in Translation', *The Financial Times* June 10, 2011, accessed April 10, 2016,

<https://next.ft.com/content/74916db6-938d-11e0-922e-00144feab49a?ftcamp=rss>.

³⁶ 'Eurofighter Typhoon - the Aircraft', March 2016, accessed April 10, 2016, <https://www.eurofighter.com/the-aircraft>.

³⁷ 'F-35 Lightning - Capabilities', 2016, accessed April 10, 2016, <https://www.f35.com/about/capabilities>.

³⁸ Manuel de Landa, *War in the Age of Intelligent Machines* (New York: Zone Books, 1992), 46.

³⁹ Kareem Ayoub and Kenneth Payne, 'Strategy in the Age of Artificial Intelligence', *Journal of Strategic Studies* November 23, 2015, doi:10.1080/01402390.2015.1088838, 11.

A War Misunderstood? Some Brief Reflections on Britain's air war in the Gulf 1990-91

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Abstract: Although the 1991 Gulf War represented the start of a significant transitional period for the Royal Air Force as it moved from a Cold War oriented, peacetime force operating from well-founded main bases to a service where regular overseas deployments became the norm, the conflict has received relatively little attention from historians. Additionally, several inaccurate popular perceptions about the nature of the RAF contribution to the air war have gained currency, clouding understanding. This short article briefly reflects on these issues and suggests that it is time for scholars to embark upon a more robust analysis of the RAF's role in the Gulf War, so as to shape a better understanding of the nature of the RAF in the early 21st Century.

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Introduction

In his introduction to the Institute of Contemporary British History witness seminar on the 1991 Gulf War, Air Vice-Marshal (AVM) Ray Lock observed that the operation to liberate Kuwait 'very much set the tone for the decades that followed'.¹ It is difficult to disagree with his assessment, since the war to free Kuwait marked the start of continuous operational deployments for the Royal Air Force, not only in the Gulf.

Yet the historiography of Britain's part in the 1991 Gulf War is a little puzzling. Although Operation GRANBY (the code-name for Britain's deployment to the Gulf, first as part of the coalition bid to deter Saddam Hussein from further acts of aggression and then to dislodge his forces from Kuwait) marks the point at which we can see the start of shift in emphasis for the RAF, there was relatively little in the way of media reflection upon the 25th anniversary of GRANBY. This perhaps reflects the slightly odd coverage of Britain's air war that has resulted, although the lack of official documentation thanks to the 30-year rule has almost certainly not helped matters. Our understanding of the nature of the RAF's war in 1991 is largely driven by contemporary media coverage, a few memoirs and books and articles considering the RAF's involvement through the perspective of particular aircraft types employed (most notably those involved in the attack role) and references in works which are dominated – understandably – by the American air effort during the campaign.² There have also been a number of unfortunate accounts of the British air effort during the campaign which have added heat but not light to our knowledge and understanding of Operation GRANBY because of an apparent misunderstanding or misreading of events and key concepts.³ As Seb Cox and Seb Ritchie have demonstrated, there were undoubtedly a number of problems which faced the RAF during Operation GRANBY.⁴ The transcript of the ICBH seminar earlier in this edition of *Air Power Review* also points to a number of serious challenges faced by the RAF. Some of these arose from a conceptual mind-set which had become fixed upon the Cold War construct, preparing for operations in Central Europe against the Warsaw Pact, and some from the long-standing issue of monetary pressures delaying the introduction of equipment. It is also worth observing that there is some evidence to suggest that the experience of the Falklands war, although limited, had some influence on the way in which the RAF approached business in 1991, and that while it would be difficult to claim that this was the result of a robust and efficacious lessons learned process, the supposed 'error' of beginning operations at low altitude was not the result of hide-bound dogma, but had a basis in recent experience.

It is the intention of this short article to offer a few reflections on the RAF's experience of the 1991 Gulf War, pointing out that some of the popular perception of the British contribution to the air war lack a certain amount of accuracy. It also aims to suggest that even without access to the official documentation relating to the 1990-91 period, a more nuanced understanding of operations can still be adduced from the available information, and that Operation GRANBY indeed marked the point at which the RAF began to adapt to a 'New World Order' which would see operational deployments overseas become routine.

Reach, Rapidity and Influence

If Saddam Hussein had assumed that his invasion and subsequent claimed annexation of Kuwait would be accepted as a *fete accompli* by the wider world, he was to be sorely disappointed. President George HW Bush was clear from the outset that Iraq's aggression would not succeed, informing journalists, 'this will not stand. This will not stand, this aggression against Kuwait.'⁵ Bush, strongly supported by the British Prime Minister Margaret Thatcher, led the efforts to compel Saddam to leave Kuwait, with diplomacy at the United Nations being supported by a clear display of military force. Although Thatcher was later to enjoy the claim that she had stiffened Bush's resolve, telling him that it was no time to 'go wobbly', Bush was very clear in his view that force might have to be used.⁶ As part of the show of determination, and based upon concerns that the Iraqi forces near to the border with Saudi Arabia might be sent over the border into that country, King Fahd invited western nations to provide support to the kingdom. Air power was at the vanguard of this, with US Air Force (USAF) F-15 Eagles, A-10 Thunderbolt II attack aircraft and F-16s deployed from the United States within ten days of the Iraqi invasion, to be followed by F-111s and F-117s a few days later. Rather lost in this is the British contribution, in the form of Tornado F3 interceptors and Jaguar GR1 attack aircraft, sent to Dharhan in Saudi Arabia and Thumrait in Oman respectively. Two Tornado F3 squadrons happened to be in Cyprus for an armament practice camp; as Cox and Ritchie note, this serendipitous occurrence meant that it was possible to send two squadrons of aircraft which were already provisioned for an overseas deployment to Saudi Arabia.⁷ Furthermore, the F3, lacking an attack role, usefully supported the narrative that the deployment of forces to Saudi Arabia was a defensive measure. The Jaguar was clearly not a defensively-oriented aircraft, but as the three Jaguar squadrons routinely conducted overseas deployments, they were a logical choice for despatch to the region. The choice of Oman as the location for their initial deployment - they would subsequently move to Bahrain, placing them closer to the Kuwait Theatre of Operations (KTO) – not only served to reassure Britain's close ally, but also had the benefit of allowing the Jaguars to operate from airbases where the type was familiar, as the Omani Air Force also employed the aircraft.

In numerical terms, this opening deployment was not particularly impressive when it is recalled that the Iraqi air force was, at the time, one of the world's largest, but this is to miss the point. The ability to swiftly deploy overseas sent clear diplomatic messages about Britain's willingness to support its allies, be that the United States of America, or Gulf nations, and helped to establish the context in which attempts to persuade Saddam to withdraw from Kuwait might be undertaken. The difficulty, of course, was that Saddam had no intention of acceding to the international community's near-unanimous demands that he pull his troops out. This meant that it was almost certain that force would have to be used to achieve this end, and an increase in RAF strength was almost inevitable as part of the build up of forces necessary to remove the Iraqi army from Kuwait.

The RAF was able to enjoy further influence here, since it was clear that any campaign against the Iraqis would involve a significant counter-air effort. As part of this, closing or disrupting

Iraqi Air Force bases would be essential. The coalition commander, General H Norman Schwarzkopf and the Joint Force Air Component Commander, Lieutenant General Charles 'Chuck' Horner were both clear that the RAF had an important role to play. Of all the coalition partners, the RAF was the only one equipped with a bespoke anti-runway capability with the JP233 munitions dispenser. The JP233 had begun life as a joint Anglo-American project, but cost issues and concerns over aircraft survivability led to an American withdrawal from the programme.⁸ Ironically, this did not see the end of American aspirations for a runway denial weapon, and the French Durandal system – which had to be used in exactly the same way as the JP233, and thus sharing all the features which raised concerns over aircraft survival – was procured instead, never to see operational use.⁹ The RAF saw the possession of this distinct capability, potentially vital to offensive counter air operations, as an advantage in 'buying' influence with the Americans.¹⁰ As Air Chief Marshal Sir Patrick Hine observed, his first meeting with General Schwarzkopf was notable for the latter remarking that he wanted armoured forces and 'Tornados...with JP233'.¹¹

This points to one of the key advantages that air power delivered – and potentially still delivers – to the United Kingdom, namely possession of discreet, 'high-end' capabilities (as JP233 was by the standards of the time) buying importance and influence with coalition partners. While it was exceptionally unlikely that the British government – particularly one led by Margaret Thatcher – would have shied away from involvement in the conflict, the ability to deploy forces rapidly to reassure allies in the Gulf, and then to be able to offer a capability which helped to ensure influence in the key planning aspects of the war to liberate Kuwait was of clear political benefit. That, however, came at some risk, since it involved the RAF Tornado GR force operating at low level to deliver its key contribution to the opening stages of the war. The use of low-level tactics has become one of the most confused aspects of subsequent understanding of the war, and it is worth providing some examination of this element of operations.

The Low-Level Controversy

Lewis Page, in his polemical account of British defence issues, is particularly notable as a critic of the use of low-level tactics:

The RAF Management levels [sic] still contend that the low-level phase in Iraq was necessary and useful, and that all the years, lives and money thrown into deep penetration low-level attack were not a dreadful, wasteful error...

...The fact is, however, that even if it had worked the whole concept had been shown to be almost suicidal. If relatively feeble Iraqi point defences alone could shoot down more than one in ten of the Tornados operating against them, one can only imagine what the bristling weaponry of the Soviet Central Front would have done....

...The air marshals now knew that their whole low-level plan had been lunacy. They still refuse to admit anything of the sort...but the facts speak for themselves. The JP233 suicide weapon has been quietly binned...¹²

As well as rather under-estimating the Iraqi defences – which can only be described as ‘feeble’ by stretching the very epistemological basis of the word to breaking point – this remarkable evaluation is seriously flawed. It is, therefore, regrettable, that while stated in a provocative manner, the thrust of Page’s claims fits in with the popular perception of the RAF’s low level operations.

The difficulty with Page’s commentary is that it ignores the key fact that RAF doctrine had largely come to mirror that of NATO, and that low-level runway denial operations were seen as a vital tool in any operation on the Central Front had war broken out with the Soviet Union. It was recognised that the risk to aircraft and aircrew would be significant, but the use of low-level weapons delivery increased the likelihood of accuracy, vice loft bombing attacks with unguided ordnance. As noted by a contributor to the Professional Pilots’ Rumour Service who had considerable experience with the Tornado GR:

The huge perceived advantage of JP233 in the procurement period was the prospect of reducing the OTR (over target requirement for a set probability of achieving the damage required) from hundreds of aircraft to tens. Bear in mind that one of the pre-JP233 options favoured was long toss with 1000lb dumb bombs with variable delay fuses, and one does not need to be a weapons expert to realise that many hundreds of attacks would have been necessary to achieve a reasonable probability of closing an airfield for even 24 hours.

Yes, JP233 made tens of aircraft highly vulnerable, particularly around the target but that was perceived to be much better than making hundreds vulnerable and maybe not achieving the objective due to lack of resources.¹³

It is, therefore, a little difficult to sustain the view that the JP233 was a ‘suicide weapon’, utilised as the result of some hide-bound and unintelligent thought by its users. Furthermore, it was hardly as though the RAF was unique in operating at low level. Perhaps the most extreme example of this can be found with the use of the B-52 Stratofortress at low level. As Jon Lake recorded, while there was a body of opinion amongst the USAF planners that the B-52 should operate at higher altitudes than planned, the majority:

...preferred low level bombing, for which the whole force had trained and which promised to give better protection against SAMs and enemy fighters.¹⁴

This led to the B-52s flying a not insignificant number of sorties at low level; the crews of the 4300th Provisional Bomb Wing flew 36 sorties at low level during the first three nights of the war, without loss.¹⁵ It is also worth noting that the F-111 force routinely operated at low level, although the use of that type has become more associated with medium level use of PGMs, particularly in the so-called ‘tank plinking’ role, while the F-15E, in its first combat operations made use of the AN/AAQ-13 and AN/AAQ-14 LANTIRN targeting and navigation pod system, which had been under development during the 1980s to provide enhanced capabilities similar to those offered by the F-111F’s AN/AVQ-26 Pave Tack system, but in a smaller package.

When it recalled that LANTIRN is the acronym for 'Low Altitude Navigation and Targeting Infra-Red for Night', the notion that low level operations were some mental aberration by the Royal Air Force is further eroded. The idea that precision attack from medium altitude could have been carried out, at night, from the start of the war also fails to bear scrutiny, since apart from the LANTIRN and Pave Tack systems, only the Vietnam-era Pave Knife targeting pod (of which only 12 units were built) provided a night and all-weather capability that was ready for employment at the start of the war, while the RAF was hurriedly taking steps to allow the early trials models of the Ferranti Thermal Imaging Airborne Laser Designator (TIALD) pod to be sent out to the Tornado force in the Gulf.

The use of the JP233 and low level tactics with 1000lb unguided weapons against the RAF's opening target sets was not, therefore, an egregious error, but a case of 'going with what we had':

...it was always HMG's policy right up to the war that what we provided for NATO would be what we used for other operations. So we were stuck with what we had and, of course, to be effective in taking out runways, and deny the use of the airfields to the enemy, we had to use the JP233...

...newspapers always over-rate such things and they banged on about the vulnerability of the Tornado. That was sheer nonsense: counter air operations at low level was not without its risks, but it was something we may have had to do against the Warsaw Pact forces... so in the Gulf War, we had what we had and we operated with what we had.¹⁶

A further undermining of the notion that all was tactical inflexibility is given by the RAF Jaguar force. Just like the Tornado, the concept of operations for the Jaguar involved low-level weapons delivery against Warsaw Pact forces, but the commander of the Jaguar detachment, Wing Commander Bill Pixton, concluded that the Iraqi AAA in the KTO was so heavily concentrated that daylight operations at low level would be suicidal. This prompted him to decide that the Jaguars would operate above the threat posed by AAA, a decision fully justified by the results. As Cox and Ritchie observe, this created some problems in terms of weapons accuracy, although the nature of the target sets meant that this was not a major difficulty.¹⁷ It required the rapid integration of more suitable weapons, in the form of CRV7 rockets and CBU-87 cluster munitions, replacing the BL755 cluster bomb which was optimised for low-level delivery. The integration of both the CRV7 and CBU-87 was not without difficulty, although both weapons systems were used to good effect in due course.¹⁸

Within a few days of the start of the conflict, it became clear that the Iraqi Air Force (IqAF) had decided to all-but cede control of the air to the coalition, which presented both an opportunity and a challenge. The opportunity lay in the ability to move the Tornado to medium altitude, out of the range of AAA and with the reassurance that operating alongside the significant American electronic warfare (EW) and Suppression of Enemy Air Defences (SEAD) capability would do much to help reduce the threat posed by guided surface-to-

air weapons. Unfortunately, the problem lay in the design of the Tornado GR1 itself. In the memorable phrase of Paul Jackson, the Tornado 'took to the medium level role like a duck to accountancy', as the weapons system on the aircraft was not optimised for operating at this level. The result was that the Tornado went from being an effective and important part of the coalition air effort to an aircraft which was not able to deliver ordnance with any particular accuracy thanks to the limitations of its avionics.¹⁹

This caused some angst in London, as members of the Air Staff became worried that this would make the Tornado GR1 particularly vulnerable in the forthcoming defence cuts. This prompted suggestions that the Tornado force return to low level operations, an idea rejected by the RAF commander in theatre, Air Vice-Marshal William Wratten, who expressed his objection to the idea in rather less colourful terms than the aircrew did when they became aware of the proposal.²⁰ The solution lay in the use of PGMs. Unfortunately, early ideas that the USAF F-15E and F-111 forces might provide 'buddy lasing' for the Tornados were impractical as a result of the lack of LANTIRN targeting pods for the F-15s and the burden of commitments placed upon the F-111Fs. This required the despatch of elements of the RAF's Blackburn Buccaneer force equipped with the Pavé Spike designator pod, and the use of two TIALD pods which had been hurried out to theatre for the ultimate form of operational evaluation. Pavé Spike was a daylight-only system, but in circumstances where the coalition had control of the air, the need to operate at medium altitude (famously not the Buccaneer's normal environment) in daylight was not the issue that it might have been. It is important to note that the Tornado/Buccaneer combination gave the coalition an important extra level of PGM capability. At the time, the F-111F, F-117A and F-15E represented the PGM capability provided by the USAF, while the US Navy's A-6 Intruder and some of its F/A-18 Hornets also had the ability to deliver laser-guided weapons; the A-7 Corsair, in its final operational deployment, also made use of the electro-optically guided AGM-84E SLAM stand-off missile. The ability to use the Tornado and Buccaneer against targets requiring the use of PGMs, notably bridges and hardened aircraft shelters further added to the importance of the RAF's contribution to the prosecution of the war.

Space precludes a full examination of the range of RAF capabilities deployed during the war, and detailed research into the role of the Support Helicopter fleet, and the tanker and air transport forces is long-overdue. The tanker fleet was essential to operations, although small in number compared to the significant numbers of American KC-135 and KC-10 refuellers; the RAF tanker force had been essential to operations in the Falklands and would go on to be one of the means by which Britain provided significant support to the United States in the opening days of the war in Afghanistan, with VC10s and Tristars being particularly valued by US Naval aviators as they conducted long sorties from carriers operating many miles away from the land-locked nation in which their target sets could be found. Only in this edition of *APR* is there a sensible academic analysis of the role of the Nimrod MR2, adding to the short accounts of the Nimrod's work in the Gulf by Tony Blackman and Bill Gunston, and illustrating a further gap in our contextual understanding of the British air war to date.²¹

When beginning to consider the RAF's role in the 1991 Gulf War, then, what brief conclusions might we draw as our starting point for further research? The first is that the coverage of the RAF's role in the conflict is still lacking. While there was an initial burst of enthusiasm in terms of personal accounts of the war and coverage by those writing about aircraft types (particularly the Tornado, Jaguar and Buccaneer), interest rather fell away in the face of numerous other deployments by the RAF, particularly in the maintenance of the No Fly Zones between 1991 and 2003, the commitment to the Former Yugoslavia which culminated in Operation Allied Force over the Kosovo crisis and finally Operations Herrick and Telic. While the skill and adaptability of the RAF proved a vital attribute in 1990, they have come to be subsumed in the inaccurate narrative which misrepresents the nature of the RAF's operations at the start of the war, with the debate over low-level operations and JP233 obscuring far too much before consideration of the air war from a British perspective rather faded from discussion.

The nature of Operations Herrick and Telic perhaps helped to further obscure the use of British air power during the 1991 war, as a popular narrative began to evolve which claimed that Afghanistan and the post-Saddam insurgency in Iraq represented the future of war; a future in which air power was an auxiliary and which was likely to cause more harm than good if used to deliver ordnance. When this complacent view of air power in decline was rudely interrupted by events in Libya in 2011, commentators did not return their gaze to 1991 to see what lessons might be drawn from that campaign, or what Operation GRANBY did for the RAF in terms of beginning the move away from operations at fixed main bases with the occasional deployment on exercise to a routine where deployments were the norm for a significant proportion of the air force. The process of defence cuts which began with Options for Change – a review which was under way while British forces were deployed to the Gulf – did not stop, and it was only after the nadir of the 2010 Strategic Defence and Security Review that commentators began to wonder whether the UK could make a significant air contribution to operations as it had during the 1990-91 period. Although the 2015 SDSR added to the RAF's equipment strength, the challenge of providing personnel to operate these aircraft was not clearly addressed – yet the evidence of GRANBY is that the ability to deploy a significant air element can be of considerable importance if Britain wishes to have relevance in coalition operations. This requires investment and a willingness to avoid succumbing to 'presentism' or being prepared only – in a cliché which gained considerable traction in the latter stages of operation Herrick – to fight 'the war, rather than a war'.

Yet much of what is now lamented in defence commentary circles as the United Kingdom having lost its ability to be influential was seen in 1991, but not acted upon. Sir Peter Harding sums it up very well:

When looking to future scenarios, the lesson we learnt is that we should not look to specific expected threats or provide specifically for those threats. Ten to one, they will not appear, but some other threat will. What we need... is a range of capabilities to make sure that we could meet most situations.²²

For all the difficulties faced, the RAF's contribution to coalition operations in 1991 was neither insignificant nor ineffective. Even without access to the official documentation, a more nuanced understanding of operations can be adduced from the available information, and Operation GRANBY may be seen as marking the point at which the RAF began to adapt to the 'New World Order' that arose after the end of the Cold War, even if the world proved to be rather more dangerous and unpredictable than the proponents of the new order had hoped. The real challenge, of course, lay in identifying the key lessons of the conflict and then implementing them in terms of training, tactics and procedures. As Seb Ritchie has observed, the process of implementing lessons has proved a thorny one.²³ The lack of detailed open-source coverage and analysis of the RAF's contribution to the 1991 war has not helped as wider understanding of the conflict remains lacking. It is to be hoped that this volume of *Air Power Review* will aid in the process of broadening understanding of the 1991 war and the RAF's part in it, thus ensuring that the enormous efforts and sacrifices of those members of the RAF who served in the conflict are fully recognised, understood and can be of full benefit to those who have followed them.

Notes

¹ AVM Ray Lock, introduction to Session 1, 'Britain and the 1991 Gulf War Witness Seminar' (hereafter 'Witness Seminar'), 16 March 2011. Unpublished transcript. The edited and abridged transcript forms an integral part of this edition of *Air Power Review*.

² See, for instance, John Peters and John Nichol, *Tornado Down* (London: Signet Books, 1993); Pablo Mason, *Pablo's War* (London: Bloomsbury, 1992); Charles Allen, *Thunder and Lightning: The RAF in the Gulf War: Personal Experiences of War: R.A.F. in the Gulf - Personal Experiences of War* (London: Stationary Office Books, 1991); Jon Lake and Mike Crutch, *Tornado: Multi-Role Combat Aircraft* (Hinckley: Midland Publishing, 2006); Martin Bowman, *Sepecat Jaguar: Tactical Support and Maritime Strike Fighter* (Barnsley: Pen & Sword, 2007); Tim Laming, *Buccaneer: the Story of the Last All-British Strike Aircraft* (London: Patrick Stephens Ltd, 1998).

³ See, for example, Lewis Page, *Lions, Donkeys and Dinosaurs: Waste and Blundering in the Military* (London: Arrow, 2007), particularly pp.133-136 and Cdr N D Ward, 'Land Based Air versus Carrier Borne Air: Real Costs and Achievements' <https://thephoenixthinktank.files.wordpress.com/2010/10/land-based-air-versus-carrier-borne-air-real-costs-and-achievements.pdf> (Accessed 22 April 2016)

⁴ Sebastian Cox and Sebastian Ritchie, 'The Gulf War and UK Air Power Doctrine and Practice', in Sebastian Cox and Peter Gray (eds) *Air Power History: Turning Points from Kitty Hawk to Kosovo* (London: Frank Cass, 2002); Sebastian Ritchie, 'The Royal Air Force and the First Gulf War, 1990-91: A Case Study in the Identification and Implementation of Air Power Lessons', *RAF Air Power Review*, Volume 17:1 (Spring, 2014).

⁵ Remarks by President George HW Bush, 5 August 1990, <https://bush41library.tamu.edu/archives/public-papers/2138> (Accessed 21 April 2016)

⁶ Lord Powell of Bayswater, *Transcript*, Witness Seminar Session 1, 16 March 2011.

⁷ Cox and Ritchie, 'Gulf War and UK Air Power', p.291.

⁸ 'GAO Critical of US Programmes', *Flight International*, 6 June 1981, p.1702; 'Can the Runway Survive?', *Flight International*, 3 October 1981, p.1016 – 'Citing grave doubts about the survivability of JP233-equipped F-111s, the US is pulling out of the joint programme'.

⁹ 'Can the Runway Survive?', *Flight*, 3 October 1981, p.1016.

¹⁰ Cox and Ritchie, 'Gulf War and UK Air Power', p.297.

¹¹ ACM Sir Patrick Hine, *Transcript*, Witness Seminar Session 2, 16 March 2011

¹² Page, *Lions, Donkeys and Dinosaurs*, pp. 135-136

¹³ Post to <http://www.pprune.org/military-aviation/199874-jp233.html> 30 November 2005 (Accessed 2 May 2016)

¹⁴ Jon Lake, *B-52 Stratofortress Units in Operation Desert Storm* (Oxford: Osprey Publishing, 2004), p.45

¹⁵ *Ibid*, p.47.

¹⁶ MRAF Sir Peter Harding, *Transcript*, Witness Seminar Session 2, 16 March 2011.

¹⁷ Cox and Ritchie, 'Gulf War and UK air power', pp.295-96.

¹⁸ *Ibid*.

¹⁹ I am grateful to a number of RAF Tornado GR1 aircrew for their insights into the problems they encountered.

²⁰ Cox and Ritchie, 'UK Air Power in the Gulf', p. 299; I am grateful to Air Vice-Marshal Ray Lock for his entertaining recollection of the response of the crews to the idea that a return to low-level operations was a sensible idea.

²¹ Tony Blackman, *Nimrod: Rise and Fall* (London: Grub Street, 2011); Bill Gunston, *Nimrod: The Centenarian Aircraft* (London: The History Press, 2009)

²² Harding, *Transcript*, Session 2.

²³ Sebastian Ritchie, 'The Royal Air Force and the First Gulf War, 1990-91: A Case Study in the Identification and Implementation of Air Power Lessons', *RAF Air Power Review*, Volume 17: 1

RAF Air Policing over Iraq – Uses and Abuses of History

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By Air Commodore (Retd) Dr Peter Gray

The academic discipline of history and the practical study warfare have been intertwined since man first sought to record his thoughts in writing and in oral history. Over the centuries, warriors have sought to fathom the depths and the mysteries of previous wars, whether successful or otherwise, to improve their chances of success – or to justify rhetoric. The use of air power over Iraq in the inter-war years has not escaped, especially during the No-Fly zone policing period of recent years. This paper seeks to highlight some of the dangers in drawing shallow conclusions and suggests ways of avoiding the pitfalls of dubious comparisons.

The lessons of history are never clear. Clio is like the Delphic oracle: it is only in retrospect, and usually too late, that we understand what she was trying to say.

Michael Howard¹

Introduction

The essential theme of this paper is that there are real dangers in drawing parallels between what has happened in the past and the events of today, and air policing over Iraq has been no exception. The victims of the potential pitfalls extend beyond the policymakers and practitioners to include students at every level of education. Also vulnerable are the casual, but interested, readers of military history whose latest foray into a given subject invites the immediate construction of ‘lessons’. Equally prone to misinterpreting the past are the legions of those charged with commenting on the present who will inevitably feel tempted to delve into history, either from shortage of material, impoverished analysis or a misplaced certainty that the parallels exist. It will be further argued that although these risks exist in any field of history, military history is particularly prone to the challenges.

The period in which the RAF, along with its allies, operated over Iraq is at least as vulnerable to these difficulties as any other in air power history. This paper will outline some generic challenges to the use and abuse of military history. It will then outline some possible guidance on how history can be used before analysing some of the key challenges pertinent to air policing and Iraq.

Uses and Abuses of Military History

All elements of history within the widest definition of the subject are possible areas for exploitation in both the beneficial sense and in terms of possible abuse. Military history certainly falls within that category. For a paper that was initially prepared for delivery in a Staff College environment, it is worth adding that the students studying therein, worldwide, both add to the risk and suffer from it. The same is, however true of University students at every level when they come to choose titles and subjects for dissertation purposes. In both environments (and arguably there is considerable overlap in degree-awarding establishments with many staff colleges offering masters level degrees) the onus is on the author to identify an interesting, or challenging subject area; analyse what has been said before; highlight gaps or areas of controversy; and then describe how their work will contribute to the sum of knowledge. Inevitably, the degree of care, desperation, clutching at straws or brilliance will vary depending on the skill of the student, the patience of the supervisor and the availability of source material. The point of this is that in the ‘old days’, once examined, the document would have been consigned to a large box-file and deposited in a locked store cupboard. The reality now is that these things are likely to surface with regularity when summoned by Google Scholar or some other search engine – albeit without the possibly feisty comments of the examiners. At the very best, this vastly increases the amount of material available for present and future scholars. At worst it also increases the amount of critical analysis that has to be expended on the subject in question.

In choosing subjects for study, current operations are always both relevant and popular. Often the detail is classified and has to be avoided. One way of achieving this is to draw parallels with earlier periods: this is especially attractive when the location chosen has been fought over before – in this case Iraq. The temptation is even greater if the operations are kinetic, coercive or involved in ‘influence’, but the fighting is short of full scale war. Again the relevance of air policing and Iraq loom large. But attempting to do this type of study requires a much broader analytical approach than is often considered prevalent in ‘military history’.

The discipline of military history is a vexed subject in its own right. This is a topic for a paper in its own right and there are many criticisms, not least that many exponents of the profession have tended to concentrate on the tactical detail and the events on the operational front without having recourse to the wider context.² The very breadth of works published on military topics compounds the difficulty in using history as a guide. This in turn is complicated by the reality that what purports to be a historical work may well turn out to be a non-specialist re-interpretation by a non-specialist; this is particularly problematical when historical events are used to justify a particular theory as occurs regularly in the business school world examining leadership.³ ‘Real’ military history – if there is such a thing – is as influenced by ‘schools of thought’ as any other field of history whether it be a Marxist interpretation, post-modern or Whig. But critically, military history is also prone to micro-schools of thought that are specific to a period of writing. In the case of this paper there was a clear service-level (or environmental) school of thought emanating from some, but not all, air power scholars that ‘air power could do it alone’. An immediate parallel to current debates is over the importance of ‘boots on the ground’. The real danger is that these schools of thinking descend into dogma and influence the historical work in its formulation and, worse, in its subsequent interpretation. The issue of dogma immediately raises the spectre of doctrine and policy. But without entering this fraught arena, it is worth noting that military history is probably more prone than most areas to the challenges of the short span from practice and policy.⁴

The final area where the use of military history can become undone is over myths. Michael Howard considers that they have a useful social function as ‘nursery history’ which is beneficial in providing a palatable introduction to the realities of warfare.⁵ But he goes on to argue that where an interpretation of history is merely a myth, and this is exposed as such, it can be ‘an anguish to be deprived of it’.⁶ It could be argued that military history, and military practitioners in particular, are especially prone to the establishment of myths and reliance thereon. Accordingly myths become another challenge to the use of military history in analysing contemporary events.

How to use Military History – some thoughts for guidance

It could be argued that military professionals could do far worse than follow Howard’s ‘three general rules’ for those wishing to study military history; these involve studying in width, depth and context.⁷ But doing so in isolation from some of Howard’s other comments on the education of the military profession would lead to an incomplete analysis. In the context of the

air presence over Iraq some of his assertions just do not hold up to the realities of that period. The first of these is that the soldier, sailor and airman would only be likely to engage in their profession once in a lifetime.⁸ Furthermore, warfare, unlike economic, political or administrative activity is intermittent.⁹ He goes on to state that war is 'clearly defined, with distinct criteria for success or failure'.¹⁰ This observation risks a detailed debate on whether the air policing over Iraq was actually war, or merely military activity. But it cannot be termed 'intermittent' and the criteria for success or failure were not easily stated.¹¹ These are but some of the challenges facing students of the period.

Notwithstanding the reservations over Howard's wider comments his 'general rules' remain valid. By studying in *width* (Howard's emphasis), those seeking to establish lessons or precedents, or even just gain a greater understanding, should read far beyond the immediate period and seek out the discontinuities as well as the parallels.¹² Howard then advocates taking a single campaign and going beyond the official histories (and the ever-increasing mass of secondary literature) by examining memoirs, diaries and letters to gauge 'what really happened' thus removing the veneer of order left by previous historians.¹³ The third, and arguably most important, guideline is the requirement to study in *context*.¹⁴ Not only are the 'roots of victory and defeat' apparent from wider social and economic factors, but so are the reasons for the conflict and its continuation. The twenty years of operations over Iraq can only be understood by examining each of these in a critical and analytical way.

Air Policing over Iraq

One of the chief problems with trying to deploy precedents from military history in examining air power over Iraq is just that; the issues, past and recent were a long way from being just being military in nature. Howard's criteria of width, depth and context are useful tools in analysing the historical backdrop to the Twenty Years over Iraq.

Many who have merely relied upon the geographical proximity of the operations immediately miss the whole point of width. Air policing was carried out in the inter-war years in other areas. The reality is that the wider issues implicit in air policing were applicable from Great Britain and Ireland through Palestine and Africa to India. The political situation was different in each region as were the strategic imperatives. It should therefore go without saying that the missions facing Imperial forces (not just the British troops) were different, as were the threats.

For a subject such as this to be given adequate coverage, the depth issue is almost insurmountable for many casual students. The ability to spend the requisite amount of time in appropriate archives studying letters, memoirs and original files is problematic. The standard recourse to lack of time in historic study is the use of secondary literature and citing material chosen by others. This flies in the face of Howard's admonition that the student needs to get beneath the veneer. Although this can feasibly be offset by due critical analysis of the secondary sources, this is not the normal result. Instead the student adds to existing veneer, often introducing (to take the metaphor a bit far) a further layer of dust and grime.

The greatest challenge to historians and students of the air policing period who have subsequently attempted to draw parallels and lessons has invariably been the absence of context. The decision to deploy air power to Iraq/ Mesopotamia was taken in the immediate aftermath of the First World War and an understanding of the economic situation is key to appreciating the wider situation in which the decision was taken. By mid-way through the First World War it was evident that the material costs would be unprecedented. The actual monetary value of the munitions expended was greatly exacerbated by the hidden costs involved in re-figuring industry onto a wartime footing and then returning it to peace – turning ploughshares to swords and then back again does not come cheap. These costs escalated rapidly with the unprecedented application of science and technology into areas such as shipbuilding, tanks and the aircraft industry. Shipping losses were huge. The human costs were horrendous with 8 million servicemen killed, 7 million permanently disabled and a further 15 million wounded in some way. Civilian casualties amounted to at least 5 million with many times that in Russia. The monetary cost has been estimated at \$260 billion which equalled 6.5 times the world national debt accrued from the end of the 18th Century to the outbreak of the War.¹⁵ Britain lost 6.3% of her male population (723,000) a significant proportion of whom were from the social elite (28% of those going up to Oxbridge in 1910 –1914 died in the War).¹⁶ The manpower requirements had caused Britain to draw deeply from the resources of the Empire as well as from home – nearly one third of British manpower came from abroad.

Imperial policing was a major, if not the most significant, defence task for all three services. The Army, along with Imperial forces and locally raised levies were constantly involved. The Royal Navy was charged with protection of the sea and trade routes. It was only natural that the fledgling Royal Air Force would seek a role in the work at hand. The centrality of these tasks to the *raison d'être* of the armed forces is hard now to grasp with the later focus on home defence and then NATO.

The struggle for their due share of the defence expenditure has always been high on the military list of priorities. It is not at all surprising therefore that both the Navy and the Army would resent every penny spent on the third arm. It is equally unsurprising that Trenchard and his senior colleagues would employ all means to ensure its survival. Whilst this is well-trammelled ground, it is important to note that what was in dispute was not the immediate use of air power. What was contentious was that the Royal Air Force needed to exist as a separate Service in order to provide that capability at the front line. At the time, it appeared that this could only be justified if air power could claim outright primacy with its own people as the C-in-C, or with independent access to the political authority of the country or mandate concerned. Anything less than this would have undermined the chances of survival. This is not the same as more recent arguments advocating that air power can 'do it alone'. Nor do many of the 'air control' arguments rest on the use of the bomber acting against strategic targets – although this was suggested from time to time (for example, over Kabul). Ironically, the real debate was not about air power doing it alone – it was more about air in the lead. This can best

be illustrated using the expression of 'air control' as meaning air as supported commander – i.e. in control of the whole operation.

The situation at the beginning of the first Gulf war was hugely different in terms of the economic situation. But at a superficial level there were similarities; the pressure on budgets, for example, would have been familiar to Trenchard and Salmond. By 1990, the demise of the Warsaw Pact had seen the almost desperate clamour for a 'peace dividend' resulting bizarre occurrences such as the financiers seeking the disbandment of squadrons as they were on the very brink of deployment to theatre. Another key parallel was the advancement of technology with all of the associated costs; the air war during 1991 had showcased the potential of modern air power, amounting in some authors' opinions to a revolution in warfare. The apparent parallels are all too seductive, tantalising and yet ephemeral; but the difficulties did not prevent the attempts at describing unhelpful precedents.

The Motivation for Drawing Precedents

The first motivating factor for students of air power to want to draw parallels emanated from the 'do-it-alone' school. The essence of this was that with the demise of the Warsaw Pact, the impact of which was then still having serious repercussions, super-power levels of conflict had been replaced by more containable, conventional conflict. In these potential conflicts, commanders and their political masters would have clear choices of the weapons needed to bring about the resolution. The air war against Iraq in 1991 had allowed the land forces to 'mop up' in 100 hours of concentrated manoeuvre. The more extreme of the air power prophets considered that the weight of the air offensive alone could win future conflicts without the need, or even the threat of a ground offensive. Seeking parallels within the air policing operations over Mesopotamia in the inter-war years thought that they had the ideal precedent. The reality was that these operations required close co-operation with discrete ground forces, and especially with political officers who were well-versed in local conditions. Nevertheless, it was clear that air power was both the weapon of first resort and that the air component was the supported, not the other way round. Furthermore, the air operations were much more economical than major operations requiring large formations of ground troops.

The period between the wars against Iraq was one of reducing defence budgets across many nations. In this environment, there was considerable pressure to use the force elements, or risk seeing them consigned to obsolescence or even oblivion. Whole capabilities were likely to be lost. This is often a short-term view, but particularly evident in the thinking of finance ministries and Treasuries. The rhetoric runs along the lines of 'if you didn't use it in Iraq, when are you: it is a cold-war legacy so cut it'. Arguably, we are still hearing the same over Afghanistan. In attempting to impose a longer term view, the air power advocate would appeal to the lessons of history for evidence that there was real value in terms of flexibility, agility and in the case of air policing the evident virtues of impermanence! One of the key factors to emerge from the first Gulf War, which was then constantly reinforced during the no-fly zone period, was the importance of precision. But the desired degree of accuracy inevitably came at a

considerably increased cost which had to be defended by current and future requirements, bolstered with recourse to the past.

Inextricably linked to the quest for precision for genuine operational reasons was the wider requirement for the campaign to be waged in a humane or ethical manner. The cynics may have argued that this merely because of the risk of being caught by CNN, but this is overly harsh in that most planners and policymakers appreciated that the inevitable regime change would have to be followed by a wider accommodation with the populace. In addition to the fundamental importance, for its own sake, of waging an air war in a just, discrete and proportional way, it was vital for the cohesion of the alliance and for the domestic audiences in the contributing nations in particular. Recourse to history in this area was particularly fraught, especially if taken out of context and only considered without depth and breadth. The context in the inter-war years encompassed the very survival of the fledgling Service and the acrimony from the other two over what they perceived to be a diversion of assets. Any criticism of air policing was worth the airing and, in the aftermath of the First World War, there was a ready audience for tales of inhumanity and brutality. A flavour of the rhetoric was the comment from Sir Henry Wilson as CIGS that the essence of air policing was the 'bomb that falls from God knows where and lands on God knows what'.¹⁸ But as Slessor recounts from his own experience, considerably more damage and destruction was caused by artillery – a reality in Afghanistan today.¹⁹ Whether in the press, parliament, the corridors of the financial planners or the drinking houses of Whitehall, it is easier to condemn air power for indiscriminate action as 'proved' by history than it is to meticulously to build the case for the defence citing the archival records, memoirs and so forth as commended by Howard in his quest for depth.

Conclusions

The RAF air policing operations over Mesopotamia in the inter-war years have been scoured for lessons, parallels and precedents that could be applied to operations in more recent times. These lessons from history have been sought for a variety of reasons and in a number of contexts. The first of these has been to 'prove' that air power could 'do it alone', or at the very least should be the weapon of first choice. Inherent in this is that the air component could, and to the more vocal, should be the supported component. These arguments and debates become all the more germane in periods of economic downturn, fiscal uncertainty and devastated budgets. Finally, but no means last, the detractors of air power have frequently sought to draw parallels between the alleged indiscriminate, or inhumane, nature of air power in the inter-war years with more modern conflicts. The reality that artillery has often resulted in greater damage and death is almost invariably overlooked.

In attempting to draw lessons from the 'Delphic Clio', the modern student of history, whether they be historian, politician, financier, business school guru or moral philosopher, would well at least to note Professor Sir Michael Howard's advice that the scholar should do her or his research in breadth, depth and context. Arguably the latter is the most important. The scholar, policy maker or practitioner needs to examine the wider context of the times in which history

was recorded embracing geo-strategic, economic, technological and policy factors. But they also need to understand the circumstances in which the original authors committed their thoughts to paper. Why did they write? What messages were they trying to get over then, or leave for posterity? For current policymakers in particular, why are you scouring history? Is your intent honourable use, or do your studies harbour dark threats of abuse?

Notes

¹ Michael Howard, 'The Use and Abuse of History', in *The Causes of War, and other essays* (London: Temple Smith, 1983), page 195.

² For an introduction see Peter W Gray, 'Why Study Military History', *Defence Studies*, 5(1) March 2005, pp. 151-164. For this particular warning see Jeremy Black, *Rethinking Military History* (London: Routledge, 2004), p. xi.

³ See for example, Alan Axelrod, *Patton on Leadership: Strategic Lessons for Corporate Warfare* (New Jersey: Prentice Hall, 1999) and Keith Grint, *Leadership, Management and Command: Rethinking D-Day* (Basingstoke: Palgrave Macmillan, 2008).

⁴ At a general level see Richard Overy, 'Doctrine not Dogma: Lessons from the Past', *Royal Air Force Air Power Review*, 3(1) Spring 2000, pp. 32-47.

⁵ Howard, 'The Uses and Abuses of History', p. 189.

⁶ Howard, *ibid.*, p. 190.

⁷ Howard, *ibid.*, p. 195. Given as guidance to contributing authors in John Olsen, *A History of Air Warfare* (Dulles VA: Potomac, 2010), p. xiii.

⁸ Howard, *ibid.*, p. 194.

⁹ Howard, *ibid.*, p. 193.

¹⁰ *Ibid.*

¹¹ See Col. Mark Garrard USAF, 'War Termination in the Persian Gulf: Problems and Prospects', *Aerospace Power Journal*, XV(3) Fall 2001, p.42.

¹² Howard, *ibid.*, pp195-6.

¹³ *Ibid.*, p. 195.

¹⁴ *Ibid.*

¹⁵ All figures taken from Paul Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 – 2000* (London: Fontana, 1989), p. 360.

¹⁶ David Reynolds, *Britannia Overruled: British Policy and World Power in the 20th Century* (London: Longman, 1991), p. 105.

¹⁷ See, for example, Richard P. Hallion, 'Precision Air Attack in the Modern Era' in Richard P. Hallion, *Airpower Confronts an Unstable World*, (London: Brassey's, 1997), p.129. See also Col. Philip S. Meilinger USAF Ret'd, 'Precision Aerospace Power, Discrimination and the Future of War', *Aerospace Power Journal*, XV(3) Fall 2001, p.12.

¹⁸ Cited by MRAF Sir John Slessor, *The Central Blue* (London: Cassell, 1956), p. 66.

¹⁹ *Ibid.*

The RAF in Operation TELIC: Offensive Air Power, March-April 2003

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By Dr Sebastian Ritchie

Operation TELIC, the UK contribution to coalition operations against Iraq launched in March 2003, was the culmination of some thirteen years of almost continuous UK air operations in the Persian Gulf, in response to a succession of challenges and threats posed by Saddam Hussein's regime. The initial UK air plan was based on a potential RAF contribution comprising 88 fast jets and 38 support platforms – more aircraft than the RAF had deployed on a single operation since the First Gulf War and more, in all probability, than it will ever deploy again. This article provides a brief summary of the Air Historical Branch narratives on Operation TELIC, and includes consideration of some of the broader lessons that might be identified from the RAF's experiences. Historically, the operation will always be viewed as a milestone along the road to improved air-land integration (ALI), and ALI was certainly a prominent issue, where the exercise of combat air power was concerned. But it is important to ensure that other aspects of the TELIC air power story are not forgotten.

Introduction

The Royal Air Force's involvement in Operation TELIC followed on from some thirteen years of almost continuous UK air operations in the Persian Gulf. In 1990, in response to Iraq's invasion of Kuwait and the initiation of Operation GRANBY, a force of more than 120 fixed-wing aircraft and 36 helicopters was sent to the Gulf as part of the US-led coalition that ultimately liberated Kuwait in the following February. September 1991 witnessed the commencement of coalition air patrols over the Northern No-Fly Zone (NFZ – Operation NORTHERN WATCH), designed to protect Iraq's Kurdish minority, while the RAF based a detachment of six Tornado GR1s at Dhahran in Saudi Arabia in August 1992 to contribute to the maintenance of the Southern NFZ – Operation SOUTHERN WATCH. This detachment was later moved to Prince Sultan Air Base, Al Kharj (PSAB).

During the so-called UNSCOM (United Nations Special Commission) crisis, beginning in late 1997, this force was augmented by a detachment of carrier-borne Harrier GR7s and more GR1s were deployed to Ali Al Salem air base, Kuwait, from where twelve aircraft eventually participated in Operation DESERT FOX in December 1998. Soon afterwards, the Saudi commitment was taken over by Tornado F3s and, at the beginning of 2000, the GR1 detachment in Kuwait was reduced to eight aircraft. This remained the UK posture in the Gulf in 2002, when the build-up to TELIC began.

What follows is a brief summary of the Air Historical Branch narratives on Operation TELIC, and includes consideration of some of the broader lessons that might be identified from the RAF's experiences during the campaign to overthrow Saddam Hussein's regime. Historically, the operation will always be viewed as a milestone along the road to improved air-land integration (ALI), and ALI was certainly a prominent issue, where the exercise of combat air power was concerned. But it is important to ensure that other aspects of the TELIC air power story are not forgotten.

The Build-Up to Operation TELIC

The first documented intimations of UK involvement in the operation that became TELIC can be traced to March 2002. In May, the Chief of the Defence Staff (CDS) was advised of a potential RAF contribution to a future operation in Iraq comprising 88 fast jets and 38 support platforms – more aircraft than the RAF had deployed on a single operation since the First Gulf War and more, in all probability, than it will ever deploy again. It was envisaged that such a force could be generated in a period of three or four months, while other UK contingents would require slightly longer. A concept for the operation was briefed to the President of the United States in June 2002, and UK planners were present in the US from July onwards.

UK participation in a coalition with the US was based on a strategic end state in which Iraq became 'a stable, united and law-abiding state, within its present borders, co-operating with the international community, no longer posing a threat to its neighbours or to international security, abiding by all its international obligations and providing effective government for its

own people.' By contrast, the end state envisaged by Washington more openly embraced the concept of regime change: the American aim was to put 'an acceptable provisional/permanent government in place.'

A formal operation plan emerged in August numbered OPLAN 1003V. This would ultimately form the basis of the operation that the Americans named Iraqi Freedom – the UK Operation TELIC. The plan was designed 'to overwhelm the Iraqi regime through a co-ordinated multiplicity of threats applied across a number of lines of operation.' These were defined as operational fires, operational manoeuvre, Special Forces (SF) operations, unconventional operations/support to other governments, influence operations, humanitarian assistance and political-military engagement. Coalition forces would attack Iraq from three directions simultaneously – the North, the South and the West, where a largely separate mission was planned to prevent Iraq from launching theatre ballistic missiles (TBMs) at neighbouring countries. During the First Gulf War, Israel had repeatedly been targeted by Iraqi Scud launches from this area. Otherwise, by mounting simultaneous attacks from different directions, the plan aimed to destroy Iraqi cohesion and prevent Saddam Hussein's forces from concentrating against the primary – southern – axis of advance.

In support of these broad objectives, the air plan had five basic components. The Counter-Air mission would eradicate any threat from the Iraqi Air Force, while Counter-TBM operations were designed to locate and destroy Scuds and Scud-related equipment in the western Iraqi desert. Counter-Land would provide direct and indirect support to coalition ground forces and SF support would also feature prominently. A strategic element was included in the air plan, involving multiple strikes against regime targets famously designed to achieve 'shock and awe'.

The UK would establish an Air Contingent Headquarters in theatre and RAF personnel would also be 'embedded' within the Combined Air Operations Centre (CAOC), securing visibility of, and influence within, the air command and control process and providing highly valued air planning expertise. The RAF would contribute offensive air assets in the form of Tornado GR4s and Harrier GR7s, and further key capabilities designed to add value to the US air campaign – notably intelligence, surveillance and reconnaissance (ISR), air-to-air refuelling (AAR) and air transport platforms. As UK ground forces were expected to enter Iraq from Turkey, on the northern axis, it was originally planned that a substantial proportion of the RAF's offensive resources would operate in the same area to support their advance. The RAF was also to establish a so-called Air Point of Departure (APOD) in Turkey through which the UK Land Contingent would deploy.

On the basis of this plan, the RAF originally envisaged the use of two Turkish airbases. The Jaguars already based at Incirlik for Operation NORTHERN WATCH would be joined by 18 Tornado GR4s, 3 E3Ds, 2 Tristar tankers and a Nimrod R1; 18 Harrier GR7s were to operate from Diyarbakir. By contrast, the RAF's presence south of Iraq was to consist of just 12 GR4s, 6 F3s, 2 Tristars and 2 Nimrod MR2s. More westerly basing was planned for a further 4 Nimrod MR2s

and 2 Canberra PR9s, and 8 VC10s were to operate from RAF Akrotiri. Fixed and rotary-wing air transport would also deploy on a substantial scale, and the UK Air Contingent was expected to number approximately 6,700 RAF personnel.

The original American concept was that operations would commence towards the end of 2002, possibly via the graduated escalation of NORTHERN and SOUTHERN WATCH. But the Bush government was sufficiently realistic to accept that a coalition operation was essential; the US could not act in isolation. With the UK inevitably viewed as the main partner in such a coalition, some compromise had to be accepted to accommodate British political sensitivities. Effectively, it would be necessary to seek United Nations authority for military action against Iraq, on the basis of her alleged failure to implement UN resolutions prohibiting the manufacture or possession of weapons of mass destruction (WMD). But pursuing the 'UN route' (as it was termed) inevitably involved delays and uncertainty, and pushed back the start of Operation TELIC into 2003.

For the RAF, there were two dominant issues in this period. The first was the collapse of the northern, Turkey-based plan, and its consequences; the second was the transition from NORTHERN and SOUTHERN WATCH to TELIC. As we have noted, UK forces were originally to operate on the northern axis of advance, using Turkey as a springboard. However, in Ankara there were deep misgivings about the prospect of coalition operations being launched from Turkish soil, and it became clear in December that the plan to attack Iraq from the north was in jeopardy. Contingency planning began, and alternative air basing arrangements were finalised in January. It was envisaged that UK forces would deploy between the end of January and mid-March.

The revised basing plan left only the 8 Jaguars in Turkey; they were grounded by the Turkish authorities on the outbreak of hostilities and played no part in Operation TELIC. All other fixed and rotary-wing detachments were otherwise concentrated to the South and West, the main fast jet presence being at Ali Al Salem and Al Jaber in Kuwait (GR4s and GR7s respectively), Al Udeid in Qatar (GR4s), and Prince Sultan Air Base in Saudi Arabia (F3s). The Tristars would all base at Muharraq, in Bahrain, E3Ds and Nimrod MR2s would also operate from PSAB, and there would be a further MR2 presence at Seeb, in Oman. The larger detachments each comprised elements of different squadrons, which were effectively merged into wings. The GR4 detachment at Ali Al Salem became known as the Combat Air Wing, while the Harriers at Al Jaber assumed the name 'Harrier Force South'. The Al Udeid GR4 detachment was simply christened the Al Udeid Wing.

The basing plan was revised at minimal notice; it involved more than 100 aircraft, thousands of personnel and multiple deployed operating bases across the theatre of operations. To many of those committed to the UK Air Contingent, experiencing the process on a day-to-day basis, it certainly must have seemed that the deployment was beset by every imaginable problem. Yet it was successfully completed in a period of 4-6 weeks – an achievement probably without

precedent in the history of RAF overseas operations, and a reflection of the substantial efforts expended on developing expeditionary capabilities during the previous decade. Thereafter, UK air power could play almost exactly the role envisaged for it under the original operation plan. The RAF proved itself to be a far more mobile force in 2003 than in 1990, but benefited from certain advantages beyond the American support that was, in any case, a feature of both Gulf Wars. There was more lead time in 2003, and the RAF was already operating from several bases in the Gulf in support of Operation SOUTHERN WATCH; relations with potential host nations were, as a result, very well established.

The second issue, the transition from NORTHERN and SOUTHERN WATCH to TELIC, assumed particularly challenging proportions as it became clear that ground operations against Iraq were unlikely to be preceded by an extensive preliminary air campaign, as they had been in 1991. The USAF Combined Forces Air Component Commander (CFACC) concluded that he would, in these circumstances, have little opportunity to degrade the Iraqi Integrated Air Defence System (IADS), unless such shaping operations were conducted under the cover of NFZ enforcement. He therefore secured such authority as was necessary to extend the parameters of SOUTHERN WATCH. However, the UK targeting directive imposed tight restrictions on RAF participation in any activity extending beyond the basic NFZ tasks.

This placed the UK Air Contingent Commander (UKACC), Air Vice-Marshal (later Air Chief Marshal Sir) Glen Torpy, in an awkward position, and he eventually felt constrained to ask for his targeting directive and ROE to be relaxed. His perspective is easy to understand, but the problem was viewed rather differently in London, predictably enough: the suggested changes in the directives would have been difficult to reconcile with the government's declared position that no decision had as yet been taken to go to war. Although very seriously considered, therefore, the request was rejected. However, there was rather more flexibility where ISTAR activity was concerned, and the targeting directive was altered to permit strikes against Iraqi forces deemed to be threatening the coalition build-up in the Gulf.

On 3 March, authority was received for aircraft deployed on Operation TELIC to participate in Southern Watch; on the 19th, the UKACC adopted the Operation TELIC ROE, at the same time as the Americans switched to the ROE for Operation IRAQI FREEDOM. Thereafter, the friction occasioned by this complex issue largely disappeared. Ministers and legal advisers accepted that a high degree of control from London was unrealistic, given the realities of high-tempo, high-manoeuve warfare, and extensive targeting delegations were issued to the UKACC, marking a significant and welcome change from earlier operations.

Offensive Air Operations and the Fall of Baghdad

The original TELIC air campaign plan envisaged the initiation of air operations to shape the Iraqi battlespace 16 days before the ground campaign began. These preparatory air strikes were to include the targeting associated with 'shock and awe'. Once ground operations started, it was broadly anticipated that offensive air power would fulfil a variety of roles, encompassing

attack, interdiction and close air support (CAS). In December 2002, the time allowed for the preliminary air campaign was cut to five days, but this did not result in a significant change in expectations. Consequently, the main RAF GR4 and GR7 detachments deployed to the Gulf foreseeing a period of attack and interdiction tasking, followed by CAS in support of the Land Component, and their preparations for Operation TELIC reflected this expectation.

However, much uncertainty still surrounded the precise circumstances in which operations would commence and, when the initial air campaign was compressed still further, it became clear that an earlier shift towards CAS was in prospect. 'A-Day' (the start of the air campaign) and 'G-Day' (the launch of the ground campaign) were then merged before, finally, the Combined Forces Commander (CFC), who exercised overall command of all committed coalition forces, decided that G-Day should actually precede A-Day; no time would be allocated for preparatory shaping operations. Against this background, the air plans were repeatedly revised, and numerous missions scheduled for the opening stages of TELIC were cancelled altogether. Much of the targeting associated with 'shock and awe' was abandoned. The ground offensive began on 20 March, while the air campaign was initiated 24 hours later.

The CFC was motivated by a number of concerns. A preliminary air campaign would warn the Iraqis that a ground assault was imminent. Tactical surprise would be lost, the Iraqis might well begin setting fire to their oil wells and Iraqi missile attacks might target the coalition's small and crowded assembly areas in Kuwait. There were also concerns that 'shock and awe' could be accompanied by collateral damage, bringing international condemnation and jeopardizing regional – Arab – support for the coalition. All of these arguments carried some weight. Nevertheless, it is clear that the CFC also wanted the forthcoming operation to provide a potent demonstration of the capabilities of the Land Component, air power having been assigned lead role in the First Gulf War, the No-Fly Zones, Bosnia-Herzegovina, Kosovo and Afghanistan.

The implications for the RAF GR4 and GR7 detachments were profound. Instead of being allocated a mix of attack and interdiction tasking as well as CAS, they received, at most, 2-3 days of pre-planned missions. During this period, in addition to more conventional tasking with Paveway laser-guided bombs (LGBs), the GR4s mounted the first Storm Shadow missile attacks, which chiefly targeted key nodes within the Iraqi Integrated Air Defence System (IADS). It was also during this phase of the air campaign – on 22 March – that the UK Air Contingent tragically sustained its only battle casualties of the operation, when a 9 Squadron GR4 returning to Ali Al Salem was shot down by a US Patriot missile battery, having been misidentified by the battery crew as a hostile incoming anti-radiation missile. The pilot, Flight Lieutenant Kevin Main, and navigator, Flight Lieutenant Dave Williams, were both sadly killed.

By 23 March, the GR4s and GR7s were largely being switched to CAS or, to be more precise, KI/CAS – standing for Kill-box Interdiction/Close Air Support. KI/CAS was a US Marine Corps (USMC) concept, which was adopted by the CFACC for the operation. The whole of Iraq was

divided into kill-boxes. Outside a Fire Support Co-Ordination Line (FSCL), some distance beyond the Forward Line of Own Troops (FLOT), aircraft were cleared to attack any targets they could find in their assigned kill-boxes, assuming they had been declared 'open'. If they were 'closed', aircraft could only attack under positive direct control, normally from a Forward Air Controller (FAC).

Inside the FSCL, kill-boxes were automatically closed unless opened with the agreement of the Combined Forces Land Component Commander (CFLCC). In the absence of such agreement, they were subject to three types of CAS, all of which necessitated positive direct control of the aircraft. Type 1 required the terminal controller to have sight of both the aircraft and the target – a rare occurrence during the campaign; Type 2 required the terminal controller to have sight of either the aircraft or the target, while Type 3 enabled air strikes to take place when the terminal controller could see neither aircraft nor target.* Ultimately, KI/CAS accounted for 75 per cent of GR4 and GR7 tasking.

For the RAF detachments, KI/CAS was accompanied by many difficulties. First, neither of the two deployed platforms was particularly well-adapted for CAS, the Tornado GR having been designed as an attack platform, while the Harrier had only really been envisaged as a *low-level* CAS asset before the general shift towards medium-level flying during the 1990s. On many occasions, the TIALD pod, which provided laser designation for both aircraft, did not give a sufficiently clear picture of the ground to allow small, tactical targets to be positively identified unless aircraft descended to lower altitudes, where there was a greater threat from ground-based air defences.

Second, as there had been no requirement for air support from the British Army since the Falklands War, none of the aircrew had any 'live' experience of CAS, and all were accustomed to extensive mission planning and pre-briefing on their targets, as well as target folders containing up-to-date photographs, intelligence and other mission-specific information. By contrast, in the KI/CAS role, aircraft were simply dispatched to a kill-box to await any tasking that became available; detailed targeting information normally only emerged during transit to the target area. After that, aircrew had still to locate the target, positively identify it, apply their targeting directive and select appropriate weaponry – a considerable challenge. Complicating matters still further, in due course, would be the requirement to conduct KI/CAS in urban environments, where the collateral damage risks were particularly high. Third, some of the Land Component's air support machinery was very far from perfect: the US Army's V Corps lacked 1 Marine Expeditionary Force (1 MEF)'s familiarity with the KI/CAS system, devised, as it was, by the USMC. For all of these reasons, a high proportion of the aircraft tasked with KI/CAS returned to base without releasing weapons.

Among the factors that influenced the outcome of KI/CAS missions, the ability of offensive aircraft to hold in the target area was particularly important, as was the availability of targeting

* For example, when forward troops were reporting the location of a target to a terminal controller in radio contact but not visual contact with both the troops and the attack aircraft.

intelligence. In the early stages of Operation TELIC, the residual air defence threat in Southern Iraq was such that larger, more vulnerable aircraft, notably AAR and ISR platforms, were kept well to the south of the Iraqi border for their own protection. This compelled the fast jets to withdraw from Iraqi airspace in order to refuel, and denied the coalition much important target information. However, once the majority of air defence threats in southern Iraq had been eliminated, it was possible to move AAR and ISTAR tracks forward to the Saudi-Iraqi border without undue risk. This improved the on-station time and intelligence supply for KI/CAS assets, increasing their chances of locating and attacking the Iraqi military.

Beyond this, Harrier Force South and the USMC Tactical Air Control Centre, which was also located at Al Jaber, collaborated closely to improve the effectiveness of KI/CAS missions involving the RAF GR7s, and a system of 'alternate targets' was introduced, in recognition of the fact that some Iraqi units and military installations had been bypassed by the rapid ground offensive and remained a potential threat. Aircraft returning to base with unexpended ordnance after KI/CAS missions in support of V Corps and 1 MEF regularly attacked these targets during the second week of the campaign.

In the initial coalition offensive, V Corps drove north-west along the western bank of the Euphrates river, while 1 MEF and 1 UK Armoured Division concentrated on securing southern areas of Iraq, including the port of Umm Qasr, the Rumaylah oilfields, the Al Faw Peninsula and Basra. Responsibility for this area then passed to 1 UK Armoured Division, freeing the bulk of 1 MEF to follow V Corps as far as Nasiriyah, where they crossed the Euphrates and advanced north. The campaign then developed into a headlong rush for Baghdad.

For the air component, this created further challenges, given the limited opportunities previously available to target the Iraqi IADS. The threat from Iraqi air defences over Baghdad was far greater than in the south. To ensure that there was no diminution in the provision of air support to V Corps and 1 MEF, the IADS had to be degraded further, so the CFACC launched a series of operations under the banner of DEAD – the Destruction of Enemy Air Defences, and not merely their suppression. Central to the entire concept was the USAF RQ4-A Global Hawk UAV, with its capacity to provide commanders with near-real-time high-resolution reconnaissance imagery, allowing coalition aircraft to be launched against enemy targets within minutes of their location. DEAD made steady progress and there was clear evidence by the 28th that Iraqi electronic warfare and surface-to-air missile capabilities were in terminal decline; on the 31st, no fewer than 38 air defence weapons or radars were destroyed. RAF platforms were not involved in these operations, but they certainly benefited from their success.

On the ground, progress slowed after 25 March. The CFC subsequently felt that the two US formations had focused too much on seizing ground rather than destroying enemy forces. It became clear that V Corps and 1 MEF's extended lines of communication were vulnerable to attack, and that measures had to be taken to ensure their security. Iraq's best Republican Guard

divisions were also known to be defending the southern approaches to Baghdad; it would have been unwise of the CFLCC to launch a major ground assault against them while his supply lines were threatened, and neither corps was at first strong enough to do so. The weather also turned against the coalition, central and southern Iraq being hit by violent and prolonged sandstorms between 24 and 26 March. By the 28th, a more-or-less formal pause in the ground offensive had been called. Plans to move against the Republican Guard divisions were postponed from the 29th to 2 April to allow V Corps and 1 MEF to marshal their resources for the forthcoming 'Battle of Baghdad'.

This unexpected pause gave the air component the opportunity to mount extensive attacks on the Republican Guard divisions deployed along the main coalition axes of advance. By the time the ground offensive resumed, it was estimated that the Baghdad Division retained a combat effectiveness of just 10 per cent. Comparable figures for the other five divisions were:

Republican Guard Division	Per cent combat effective
Medina	25
Adnan	55
Hammurabi	55
Nebuchadnezzar	70
Al Nida	70

The divisions that suffered least apparently reduced their vulnerability to air attack by employing such far-reaching dispersal and concealment measures that their combat capability was also substantially reduced. Hence, V Corps and 1 MEF encountered only the most limited and ineffective opposition when their offensive resumed. As one British observer put it on 3 April, 'Question is, where has the enemy gone? It is not certain if they have withdrawn, been destroyed or deserted. Probably a combination of all three.' The anticipated pitched land battle for Baghdad never materialised; on 9 April, the Iraqi capital passed decisively into coalition hands.

Counter-TBM Operations

Beyond supporting the coalition offensive in Southern Iraq, the RAF's chief contribution to Operation TELIC involved Counter-TBM operations in the western Iraqi desert. The Counter-TBM task was of exceptionally high strategic importance. The Iraqis had launched Scuds against Israel in 1991 in a transparent attempt to precipitate Israeli retaliation. An Israeli attack on Iraq might well have united Arab opinion against the West, resulting in the withdrawal of Arab nations from the coalition. The same countries might also have denied other coalition members permission to operate from their soil in these circumstances. In the event, through sustained diplomatic efforts and a mammoth *ad hoc* diversion of resources, including air power, SF and Patriot missiles, Israel was dissuaded from intervention.

In 2002, as the prospect of further conflict with Iraq became increasingly real, US and UK planners had to address the possibility that Saddam Hussein would pursue exactly the same strategy, possibly using missiles equipped with chemical or biological warheads. Although many Scuds had been destroyed after Operation GRANBY, no satisfactory inventory of missiles had ever been produced by the Iraqi government; on the basis of UNSCOM investigations in the 1990s, it was believed that a few had been retained at hidden locations and Iraq was also suspected of holding Scud components that might have been used to make more missiles. Naturally, the Israelis were also deeply concerned that they would again come under attack in the event of a Second Gulf War. Unless a concerted effort was mounted by the coalition to address the Scud threat, there was always a danger that Israel might initiate action against Iraq unilaterally.

In July 2002, the US Air Combat Command was tasked to devise a Counter-TBM concept of operations (CONOPS), involving a range of reconnaissance and offensive support aircraft, as well as ground elements. This was the genesis of an operation that would become a major commitment for the RAF in due course. Alongside the USAF contingents, the RAF deployed more GR7s as well as Canberra PR9s, C-130s and Chinook helicopters, and the Nimrod MR2 and E-3D detachments based at PSAB were also assigned to Counter-TBM. In addition, provision was made to exploit the GR4's excellent low-altitude capability when adverse weather inhibited medium-level surveillance or bombing, and both VC10s and Tristars provided vital AAR. In all, some 32 RAF aircraft were permanently assigned to the mission, along with the GR4s and tankers.

The basic Counter-TBM CONOPS that emerged during the later months of 2002 was based on close collaboration between offensive air power, airborne ISR and coalition SF drawn from the Combined Joint Special Operations Task Force-West (CJSOTF-W). Operations in Afghanistan in 2001 had witnessed an unprecedented level of Air-SF collaboration; the CONOPS sought to build on this experience. The primary aim was to deter Iraq from attempting to launch any Scuds by maintaining a significant air presence over Western Iraq and a limited but very potent and highly mobile ground presence. The second objective was to find and destroy any remaining Scuds or Scud-related equipment. This involved the observation of some 6,000 possible hide sites located chiefly along the few main supply routes that ran across the desert towards Syria and Jordan. The sites were to be monitored partly by airborne ISTAR and partly by combat aircraft functioning in the Non-Traditional ISR (NTISR) role. On the ground, hide sites would also be inspected to achieve so-called 'area sanitisation', when it was firmly established that none of the sites in a particular area were being used.

The CFACC was appointed as supported commander for the Counter-TBM mission, while the role of supporting commander was assigned to the Combined Forces Special Operations Component Commander (CFSOCC) and Operational Control (OPCON) was exercised by the commander of CJSOTF-W. Operations were planned by a Counter-TBM Strategy Chief, who headed a dedicated team at the CAOC, and he provided guidance to a Mission Commander

with day-to-day responsibility for all airborne Counter-TBM operations and assets. Beneath him, mission planning cells functioned at base level, while continuous tactical command and control functions for airborne assets were executed by the RAF E-3Ds.

In the first Gulf War, the Iraqi Scud launches had caught the coalition off guard; in 2002, it seemed clear that the Scud would only be defeated if extensive preparations preceded the outbreak of hostilities. Iraqi launch doctrine and the tactics employed during 1991 were carefully scrutinised. There was close liaison between key US and UK personnel, and several exercises were organised in the US and in theatre to test the CONOPS, which was transformed into a clear and detailed 'playbook' for all participants, defining all the agreed Counter-TBM tactics, techniques and procedures. Many (though by no means all) the air and ground force elements committed to Counter-TBM had the opportunity to conduct at least some training together before the onset of hostilities.

The Counter-TBM mission was launched on 19 March 2003 – the day before G-Day – and focused at first on more westerly and southern areas, before moving north towards the Syrian border. The operation went largely according to plan, rewarding all the meticulous preparations of the preceding months, but no Scuds were located and there were no launches. Their whereabouts have since been the subject of much conjecture and may never be definitively established. As the number of Scud launches would probably have been very small, in any case, it might be contended that the Counter-TBM mission needlessly tied up resources that could more profitably have been employed elsewhere.

Yet this would be wrong for three reasons. First and foremost, the mission was essential to dissuade the Israelis from intervening and jeopardising Arab support for the coalition. As there was no overt Israeli action against Iraq, this objective was achieved. Second, however small the residual threat from the Iraqis may have been, one single successful Scud launch against Israel could have exercised a wholly disproportionate strategic effect, with disastrous consequences. Third, even if Scuds were not launched initially, there was always a possibility that they might be deployed later on, perhaps in a final act of defiance as coalition troops reached Baghdad. It was for this reason that the CFC continued to attach top priority to Counter-TBM and insisted on maintaining the hide-site checks throughout Operation TELIC. Once it was established that coalition air power could monitor the majority of sites independently, it was, in fact, possible to transfer at least some CJSOTF-W units to other high-priority tasks.

Ultimately, the coalition forces assigned to Counter-TBM opened what was virtually a third front in Western Iraq, additional to the main southern front and the northern front created by American airborne forces at the end of March. In so doing, they contributed to a process whereby coalition operations destroyed the cohesion of the Iraqi regime and its security infrastructure by exposing it to multiple simultaneous threats. Of particular importance were operations in the Haditha Dam area, in support of an American ground unit, Task Force 20. The dam, on the upper Euphrates River, became a focus of coalition attention when intelligence

suggested that the Iraqis might destroy it to flood the lower Euphrates valley and impede the advance towards Baghdad. Such a measure would also deny vital hydro-electric power to any post-Saddam regime.

Task Force 20 was therefore deployed to secure the dam, but they were soon attacked by a substantial Iraqi formation, which included tanks, self-propelled guns and artillery. Without heavy weapons of their own, Task Force 20 would have faced insuperable odds had abundant air power not been available on call. Over a period of several days, USAF F-16s and RAF GR7s mounted frequent strikes against the Iraqis, while airborne command and control was provided by the E-3Ds. The GR7 strikes targeted tanks, artillery, mortars, military vehicles, buildings, and patrol boats on the reservoir. Their intervention ensured that Task Force 20 retained their hold on the dam until relief arrived on 7 April.

Offensive Air Operations: Assessment

Coalition dominance in the air was a decisive factor in the rapid overthrow of Saddam Hussein's regime. The Iraqis proved completely unable to assemble large or remotely capable ground formations to block the coalition advance and did not launch a single counter-attack against the main V Corps or 1 MEF spearheads; the most they could achieve amounted to small-scale, piecemeal raids on the extended American supply lines. Under relentless pressure from the air, the Iraqi divisions guarding the southern approaches to Baghdad largely melted away, leaving the city only lightly defended. Shattered command and control and intense demoralisation were amply demonstrated by the disintegration or surrender of many units.

The Combat Air Wing's contribution to this successful outcome, from 20 March to 15 April 2003, consisted of some 498 planned sorties from Ali Al Salem, 476 of which actually became airborne. Of the 498 planned sorties, 324 were classed as offensive support and there were 121 reconnaissance sorties employing the GR4's RAPTOR pod. Other tasking encompassed Counter-TBM in Western Iraq, Storm Shadow launches and Suppression of Enemy Air Defences (SEAD), using the ALARM anti-radiation munition. In the same period, the Al Udeid Wing planned 278 sorties, 268 of which flew.

Both wings predominantly discharged the offensive support task using TIALD and laser-guided Paveway 2 bombs. The GPS-guided Enhanced Paveway 2 (EPW 2) was also employed. However, during KI/CAS missions, crews had to exercise extreme caution when using GPS-guided munitions: in the heat of battle, it was by no means unusual for ground units to supply inaccurate target co-ordinates. The target list extended right across the military spectrum, but particularly featured tanks, other armoured fighting vehicles and miscellaneous military vehicles, artillery, radars, fielded forces, military buildings, command and communications nodes and supply depots and bunkers. A significantly higher proportion of offensive support sorties flown from Ali Al Salem resulted in the release of weapons, compared with Al Udeid. Flying over far longer distances to reach the target area, the Al Udeid GR4s were unable to

hold for so long awaiting tasking without AAR, which was by no means always available. The Combat Air Wing was also allocated a somewhat higher proportion of fixed targets than the Al Udeid Wing, which was overwhelmingly assigned to KI/CAS.

Of the other GR4 capabilities, the RAPTOR pod's stand-off performance and the high quality of its imagery drew very favourable comment throughout the operation, although the system was found to require intensive maintenance to remain serviceable in an environment characterised by high ambient temperatures. As for Storm Shadow, the missile's performance has to be viewed in context. Operation TELIC was essentially used as an opportunity to test Storm Shadow in a live operational environment and many of the deployed munitions were 'development' missiles rather than the finished article. The trial proved extremely valuable: Storm Shadow demonstrated exceptional accuracy, and several important lessons were identified to help improve its performance still further in future operations.

From 21 March to 14 April (inclusive), Harrier Force South flew 190 operational missions for 389 sorties. In all, 367 offensive sorties were flown, the overwhelming majority of which involved KI/CAS. The detachment also mounted 22 reconnaissance sorties with the Joint Reconnaissance Pod (JRP). During Operation TELIC, the Al Jaber GR7s released 117 munitions, chiefly against fielded Iraqi forces; other targets included aircraft, surface-to-air missiles, radars and minelaying vessels in Basrah harbour. The GR7s assigned to Counter-TBM flew 142 missions for 290 sorties. Some 32 sorties released weapons and 73 munitions were dropped in all. The contrasting strike rates partly reflect the fundamental difference between the two detachments' respective tasks; 3 Squadron were dispatched each day to perform both the NTISR and attack roles, but a large part of the NTISR task was focused on one specific object – the Scud missile – which was not, in fact, deployed in the western desert. By contrast, the Harrier Force South reconnaissance role was entirely separate from their attack role, and offensive missions were tasked to destroy virtually any legitimate Iraqi target that could be found. They were also allocated some pre-planned and alternate targets, whereas 3 Squadron was not.

As in earlier operations, the GR7 proved itself to be an extremely robust platform, and boasted an excellent serviceability record; it also demonstrated great flexibility across the tactical spectrum. Again, the TIALD pod functioned as a critical enabler, despite its limitations: TIALD and Paveway provided a vital combination of precision and firepower, and Paveway II bombs guided by TIALD accounted for 49 per cent of weapons used by Harrier Force South. However, due to the over-riding priority assigned to Counter-TBM, only a limited number of pods and TIALD-capable GR7s were initially allocated to Harrier Force South, and heroic efforts were required from the wing engineers to ensure that virtually every GR7 mission included at least one TIALD-equipped aircraft. Other weapons employed by the GR7 detachments included the EPW 2, the Maverick infrared-guided missile, and a small number of unguided 1,000lb and 540lb bombs and RBL 755 cluster bombs. Of these, EPW 2 and a modified electro-optical version of Maverick proved the most effective.

Across the detachments, there was a significant improvement in the accuracy of bombing over the standards achieved in earlier large-scale operations. This reflected a marked increase in the ratio of precision-guided to non-precision-guided weapons, as well as greater aircrew experience with TIALD and Paveway and better training. Nevertheless, the operation demonstrated that improved targeting pods were required, together with smaller precision-guided munitions, to allow tactical targets to be engaged from medium altitude with the absolute minimum of collateral damage risk. There was a particularly pressing need for a new anti-armour weapon to replace RBL 755. The installation of tactical data-links across the various aircraft fleets was also strongly recommended.

However, the key air lessons stemmed directly from the many and varied challenges associated with KI/CAS. Both the UK Air and Land Contingents periodically found themselves struggling with the KI/CAS system, and the operation clearly demonstrated that it was essential for the RAF and the Army to conduct far more regular and intensive CAS training than had generally been undertaken during the preceding decade. Given the subsequent preponderance of CAS tasking in Operation TELIC and HERRICK, this lesson has tended to fade from view, and it is important, now that British ground troops have been withdrawn from Iraq and Afghanistan, that there is no return to the situation that prevailed before 2003.

In the aftermath of Operation TELIC, OPLAN 1003V was widely proclaimed to be a model for future intervention operations, the assumption being that a preliminary air campaign to shape the battlespace was no longer necessary. In future, Land would lead and Air would follow, chiefly through the provision of CAS and reconnaissance. Yet this assessment may be challenged on a number of counts. With so many aircraft being left untasked to return to base with their weapons, the experience of KI/CAS during the operation raised far-reaching questions about such elementary principles of war as economy of effort and, in the longer term, sustainability. Furthermore, it would have been impossible to dispense with preparatory shaping activity and provide comparable support to the Land Component if Iraq had boasted a more capable IADS. In March 2003, G-Day could precede A-Day only because of the progressive degradation of Iraq's air defences since the First Gulf War and a certain amount of shaping activity carried out by the Americans during the closing stages of Operation SOUTHERN WATCH.

More broadly, TELIC marked a clear break from the air-centric strategies that had predominated since the end of the Cold War. Initially, the case for 'boots on the ground' in Iraq was apparently underlined by the ease with which the immediate campaign goals were achieved, and yet this only served to deceive coalition governments when they were confronted by the infinitely more difficult task of post-war reconstruction. The price of over-optimism was a protracted and costly insurgency, which was only defeated through the commitment of still more ground troops. But the effect was purely temporary. Security and stability did not survive for long after coalition forces finally withdrew; the rise of ISIS may be traced directly back to the events of March and April 2003. Iraq's troubled history since the fall of Saddam Hussein suggests that

there is a strong case for reconsidering the air-based strategy of containment, as pursued via the Southern and Northern NFZs, in the decade following the first Gulf War. In 2003, it was argued in some quarters that containment had failed, but it could hardly be maintained that boots on the ground have fulfilled the aspirations of western governments more successfully since then.

As for the Counter-TBM mission, by creating, in effect, an entirely separate battle front, the Air-SF combination central to the CONOPS pointed towards an alternative approach to military intervention that was high on capability and effect but low on footprint. It proved itself to be extremely dynamic and responsive, and it demonstrated considerable scope for further development. Yet a number of episodes served to underline the fact that even the most effective air support providing continuous firepower, ISTAR and mobility, could not entirely offset the limitations of the SF – notably, their relatively small numbers and their lack of heavy weaponry. Furthermore, while Counter-TBM may have written a new chapter in the convoluted history of air-land integration, it did, to an extent, lock up the air assets involved, raising questions about how, or even whether, the inherent flexibility of air power can be retained if similar missions are conducted in future.

Operation IRAQI FREEDOM Air Campaign: A Tactical Military Success, or a Strategic Information Failure?

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Operation IRAQI FREEDOM began on 19 March 2003. Unlike the 1991 Gulf War, the 2003 air campaign was very different both in its execution and its implications for air power thought. This article first examines the OIF air campaign, looking at how its historical lineage and the military and political factors of the day shaped its development and execution. It then moves on to consider the effectiveness of the air campaign, in terms of both its military outcome for Coalition and Iraqi forces and importantly in today's media-savvy environment, in terms of whether or not the Coalition successfully translated military and technological superiority to information superiority amongst the public. The article concludes that the complexities of modern air campaigns are such that tactical military success can easily turn to strategic information failure if air power's capabilities are not clearly understood and matched to specific operational requirements. Furthermore, the contemporary operating environment is now too complex to characterise air campaigns as being a success or failure, raising questions as to whether previous absolute theories on the utility of air power are still relevant to complex non-linear campaigns in the twenty-first century.

Introduction

Operation IRAQI FREEDOM (OIF)¹ started on 19 March 2003 with an attempted decapitation strike against Saddam Hussein. At the time thought to be the start of a second spectacular air campaign against the Iraqi regime similar to the DESERT STORM air campaign in 1991, it quickly became clear that OIF was to be very different both in its execution and in its implications for air power thought. Rather than being overshadowed by the land component, the air component effectively redefined the notions of how airpower can be used to best effect in twenty-first century warfare.

Analysis of the OIF air campaign clearly demonstrated that the effectiveness of airpower lies as much in the perception of its achievements as in the actual achievements themselves. The complexities of OIF with the multitude of measures of effectiveness that can be applied across the physical, cognitive and information domains, make assessing the outcome of the air campaign a complicated process. If that assessment is then viewed against a backdrop of an uncertain campaign end state and the political and societal demands and expectations of an information hungry, media-savvy population, it can be argued that the assessment of any air campaign based solely around the absolute notions of success or failure is overly simplistic.

With this in mind, this article examines the 2003 air campaign in terms of both its military outcome and the public's perception as an indicator of how successful the air campaign was in the information domain. It aims to show that if considered in isolation, the OIF air campaign seemingly corroborates Robert Pape's thoughts on the utility of air power as an independent strategic option;² viewed in this sense, the air campaign can only be described as a qualified success at best. However, if viewed as a key component in a fully integrated joint campaign, simultaneously operating across the levels of warfare, then it can be argued that the air campaign was militarily successful to such a degree that it effectively made previous absolute theories redundant. But when examined against the broader background of the media and information domains, the outcome of the air campaign, whilst predictable from a western perspective, was an overall failure because of its inability to affect Iraqi and Arab opinion, possibly to the extent that the public relations failure helped sow the seeds of anger and potential insurgency amongst the Iraqis and Arabs.

The article will start by seeking to better understand the 2003 air campaign, how it developed and how it was influenced both by the earlier Desert Storm campaign and the Rumsfeld Doctrine which was gathering momentum at the time. From there, the article moves on to briefly examine the execution of the air campaign, specifically looking at the notion of 'Shock and Awe' which the campaign quickly became synonymous with and seeks to draw out the implications this had for both the Coalition and Iraqi forces. In doing so, and whilst not doctrinally correct, the article considers the air campaign to include both air and aviation assets. Furthermore, whilst the air campaign is considered to have been executed over the period 19 March – 18 April 2003 (as defined by US Central Command³), it also notes the significance of Operation SOUTHERN FOCUS, the campaign to systematically degrade Iraqi

air defences in the south of the country prior to the start of OIF. Having assessed the air campaign from a military perspective, the article seeks to assess it from the perspective of the information domain, examining whether or not the military and technological superiority displayed by the Coalition extended to the public relations battle. However, it should be noted that analysis of the air campaign's impact on public relations at the time is complicated by much of the available material being bound in general opinions on the war rather than providing specific insights into the air campaign. Furthermore, some of the official reporting on the air campaign either remains classified and cannot be included here, whilst other open source material is drawn from potentially unverifiable interviews and blogs.

The Air Campaign

It has been argued that the air war in Iraq in 2003 was effectively won during the first Gulf War in 1991⁴ when large numbers of the Iraqi Air Force's aircraft were either systematically destroyed in their supposedly hardened shelters or fled to Iran having escaped the Coalition attacks.⁵ In order to more fully understand the OIF air campaign, it is worth examining the concepts involved in its planning and how it compared to the 1991 air campaign and the concept of "Shock and Awe".

The 1991 DESERT STORM campaign was in reality one of separate ground and air campaigns brought together rather than being a fully integrated joint campaign. The initial plans drawn up by US Air Force's Tactical Air Command and the US Navy seemed to draw inspiration from the Vietnam-era Rolling Thunder campaign, suggesting that the relatively static Cold War had stifled innovation and thinking. In this sense, the initial air plan for DESERT STORM saw air power to be a strategic asset⁶ only in so much as the numbers of aircraft, distances flown and numbers of bombs dropped were as important, if not more important than assessing how the air campaign contributed to the overall strategic effect. Eventually, a revised air plan was drawn up, heavily influenced by a team lead by Colonel John A Warden III. The revised plan - Instant Thunder - was based around incapacitating Iraq's strategic leadership and destroying key military capabilities. Warden believed that hitting these centres of gravity simultaneously would lead to strategic paralysis and would force the Iraqis to comply with UN and US demands. Although Warden's plan morphed once in the hands of the theatre planners, his target sets remained at the heart of the air campaign which had developed into a plan to achieve four operational-level goals: a "strategic" component, suppression of enemy air defences in the Kuwaiti theatre of operations, shaping the battlefield and support to the ground campaign.⁷ Although widely portrayed as a success, Murray and Scales suggest that the overall plan was disjointed. Rather than maximising the synergistic effects of air and ground forces, the 1991 air campaign was conducted in isolation from the ground campaign, and was actually a composite campaign with the "strategic" element in Iraq remaining separate from the element in Kuwait which focused on destroying Iraqi military hardware.⁸

Just as the 1991 air campaign had its roots in an earlier conflict, the plan for the 2003 air campaign evolved against the backdrop of Afghanistan when CENTCOM Commander General

Franks was ordered to update the plan for invading Iraq. However, unlike the 1991 campaign in which the air and land components operated within their own distinct environments, General Franks, echoing Secretary Rumsfeld's thinking, was heavily influenced by the ongoing Afghan campaign where the use of precision airpower and special forces achieved in weeks what might have taken 50,000 ground troops months or years to achieve.⁹ Rumsfeld in particular viewed the successful combined action by US Special Forces and Northern Alliance at Bai Beche in the battle for Mazar-e Sharif in November 2001 as a prime example of what could be achieved by lighter, mobile ground forces supported by precision air power¹⁰ and was as such the ideal template for operations in Iraq. This approach, sometimes dubbed "the Afghan Model",¹¹ signified a move away from the Powell Doctrine of overwhelming mass used in 1991 to a new doctrine of overwhelming force – the Rumsfeld Doctrine.¹² This new approach sought to use airpower to target the institutions supporting the Iraqi Regime, simultaneously attacking the Iraqi military forces, rather than targeting national infrastructure and the Iraqi people. This integrated approach was a direct contrast to the 1991 campaign where the air component effectively operated in isolation from the ground component.¹³

As with Warden's Instant Thunder plan, the air-heavy nature of the initial 2003 plan caused consternation amongst the Washington planners who demanded significant amendments. CENTCOM air planners wanted an opening air campaign based on the Gulf War model,¹⁴ the original plan for an initial twenty day air campaign was gradually cut back to three days of air operations only to have the land campaign begin before the massive air offensive.¹⁵ Whilst much of the detailed planning for OIF remains classified, it is not inconceivable that criticism of the initial air-heavy plan had as much to do with opposition to Secretary Rumsfeld's ideas on defence transformation as it did with the plan itself. Rumsfeld's ideas effectively required a wholesale cultural change which ran contrary to the belief in some quarters that the Army's role should be to prepare for conventional wars rather than 'non-traditional missions'.¹⁶ In these 'non-traditional missions', precision firepower, rapid mobility and situational understanding favoured lighter, high tech forces supported by the full spectrum of air power capabilities over the 'heavy metal' of the Cold War army. Set against the background of the 'Rumsfeld transformation', planning for OIF was not only a debate about how to fight a war, it was a debate on how to organize, equip and resource the future US military.¹⁷ With the lack of open source reporting on the planning process, it is difficult to assess airpower's intended role,¹⁸ but according to the Ministry of Defence the air campaign intended to:

1. Neutralize the Iraqi Air Force and its Integrated Air Defence System.
2. Conduct strategic attacks against leadership targets.
3. Provide armed air support to own ground and maritime forces.
4. Deter and counter possible threats from Iraqi ballistic missiles.
5. Destroy the Republican Guard.¹⁹

Whilst campaign planning was ongoing, the US and UK had already started using airpower to prepare the Iraqi battlespace for future operations. From summer 2002 onwards, the US and

UK intensified operations in the southern No Fly Zone, implementing Operation SOUTHERN FOCUS to degrade the Iraqi air defences,²⁰ with the attacks in early 2003 intended to prepare the ground in advance of any invasion force. This allowed the initial air effort to focus on gaining air supremacy over the rest of Iraq and attacking strategic targets.²¹ It seems clear that SOUTHERN FOCUS was an integral part of the Coalition's broader air campaign, executed in advance of OIF starting on 19 March 2003.

Central to the wider understanding of the OIF air campaign is the principle of 'Shock and Awe'. It was thought that by combining a total knowledge of the enemy, rapidity, brilliance in execution and control of the environment, a smaller invasion force could induce 'shock and awe' in the Iraqi Regime, rendering it impotent.²² This concept gained momentum as it resonated with Rumsfeld's thoughts on transforming the US military to one of effect rather than mass. It also gained media attention,²³ and when General Franks promised that four times the ordnance used in Desert Storm would shock the Iraqis into submission²⁴ it seemed to confirm 'Shock and Awe' was the basis for forthcoming operations.

The air campaign's execution surprised many on both sides. The attempted decapitation strike on 19 March 2003 caused confusion amongst Coalition air commanders²⁵ as well as amongst Iraqi commanders such as Gen Hamdani (Republican Guard II Corps Commander) who expected a repeat of the first Gulf War.²⁶ Hamdani's thinking echoed Saddam's, who also expected an initial bombing campaign before the ground war. Believing the Iraqi Air Force could not mount a credible defence, Saddam reportedly ordered it to disperse its aircraft for future use.²⁷ Whilst Woods believes this points to Saddam's belief that the Regime would survive it also implies recognition by the Iraqi Regime of the Coalition's overwhelming airpower dominance.

Assessing the Air Campaign

It should be difficult to describe any campaign that lasted three weeks and seized a country the size of California as anything less than a brilliant victory.²⁸ However, to label the air campaign as a success or failure is to over simplify it.

Before OIF started, the media expected a short decisive campaign to break the Regime within days. As the Regime was built around Saddam, Ullman believed his swift removal might be sufficient to cause its collapse: "...if you kill the emperor, the empire's up for grabs. And had we killed him, it would have been a classic application [of the theory]: \$50m of ordnance, and we won the war."²⁹

This thinking puts the 19 March and 7 April decapitation strikes into context; however, both strikes were unsuccessful leading to suggestions that all they achieved was to create a state of uncertainty.³⁰ The apparent failure of airpower to decapitate the Regime and forestall a protracted campaign seemingly substantiated Pape's argument that air power cannot in itself achieve strategic effect.³¹ From the perspective of the air campaign as an independent strategic action, this key element appeared to have failed.

As well as an apparent failure to achieve independent strategic effect, the air campaign also appears to have been unable to achieve air supremacy, despite pre-emptively targeting the Iraqi air defence network and Saddam grounding the Air Force. This failure was seen nowhere more clearly than during a deep strike operation against the Republican Guard's Medina Division by the US Army's 11th Attack Helicopter Regiment on 23 March 2003. Thirty Apache gunships were launched against armour and artillery targets in the Karbala area, but the mission failed after coming under heavy surface-to-air fire, resulting in the loss of one aircraft, its crew later appearing on Iraqi television,³² and the remaining twenty-nine aircraft aborting, some with heavy battle damage without causing any appreciable damage to the Medina Division.³³ The months of Coalition airstrikes had the unintended consequence of familiarizing the Iraqi military with Coalition capabilities, leading them to use simple but effective localized tactics based on optical tracking, cell phones and low power radios³⁴ rather than an integrated air defence system. Despite their technological inferiority, the Iraqis demonstrated they could still mount an air defence, albeit an unconventional one and at a local level, leaving the Coalition only with sufficient control of the air rather than blanket air supremacy.

11 AHR's failure at Karbala also pointed to deficiencies in the initial air-land integration process, further questioning whether the air campaign could be described as a definitive success. V Corp's Fire Support Coordination Line (FSCL) was set to enable them to employ organic aviation and ATACMS³⁵ to shape operations in depth. However, in doing so, it also meant that V Corps created a barrier to air assets operating between the Corp's forward lines and the FSCL, limiting the air component's ability to attack targets that ground forces could not effectively hit. Indeed the outcome of 11 AHR's ill-fated Karbala mission, which fell in the gap between the forward line and the FSCL, all but closed the air space to the very air assets that could have assisted the ground forces.³⁶ For all the air component's advances in technology, it appears that in the early days doctrinal incompatibility between the Air and Land Components effectively prevented the use of precision air power at the cost of missing at least one full night of fixed strike targets inside the FSCL.³⁷ Not only did the failure of the decapitation strikes support Pape's ideas that air power was more likely to achieve success when used in direct support of ground forces – so called hammer and anvil operations – the failure to address battlespace coordination issues, something previously highlighted at the end of the 1991 campaign³⁸ – meant that airpower could also be limited in its tactical utility by Component parochialism.

Despite these failures, when viewed in a broader sense, a number of aspects point to the air campaign being highly successful above and beyond what are effectively procedural rather than doctrinal failings. Despite failing to achieve their aims, the attempted decapitation strikes demonstrated the Coalition's ability to respond to strategically important time sensitive targets in cluttered urban environments. From the initial tasking by the Joint Chiefs of Staff to striking the targets during the strike on 19 March 2003 was approximately four hours,³⁹ whilst the strike on 7 April 2003 was conducted within twelve minutes of intelligence

agencies receiving reports of Saddam's location.⁴⁰ The ability to minimise targeting cycle timelines allowed the Coalition to get inside the Regime's OODA loop and prosecute a further 156 time sensitive WMD, leadership and terrorist targets as well as enabling the air component to dynamically re-task airborne assets against a further 686 highly mobile and tactically significant targets.⁴¹ This was a major development compared to the 1991 campaign where the Land Component complained that air tasking was fixed to the seventy-two hour ATO cycle,⁴² demonstrating improvements since 1991 in airpower's ability to deliver effect against precision targets of opportunity in a cluttered and congested environment.

Higher order effects of the failed decapitation strikes concerned their disruptive effects on Iraqi strategic command and control. Iraqi command and control was already limited by its highly centralised nature and the elaborate steps Saddam put in place to ensure his protection. The ability to conduct short notice precision air strikes against key targets forced Saddam to implement increasingly restrictive security measures, effectively paralysing the Regime's ability to act and hindering Saddam's ability to direct senior commanders as these security measures hampered the ability to arrange meetings.⁴³ The resulting paralysis was clearly seen on 2 April 2003 when Saddam, believing that the Coalition's main advance was coming from the west rather than the south, ordered commanders to move forces to the north of Baghdad.⁴⁴ Although Saddam was receiving intelligence reports, they were worthless by the time they finally reached him. As many senior commanders lived in fear of death for acting on their own initiative rather than Saddam's orders,⁴⁵ Saddam's continued existence was an important part of maintaining the sense of paralysis. Contrary to the notion that the decapitation strikes were a strategic failure, they are useful examples of the second and third order benefits the Coalition derived from its ability to conduct precision strikes at a time and location of its choosing. That the intended target was not at either location appears to have more to do with the quality of the intelligence reporting rather than the air component's inability to prosecute the targets.

Technological improvements in ISTAR, aircraft avionics and precision guided munitions (PGMs) also contributed to the air campaign's effectiveness by enabling air assets to operate at night and in poor weather. When the *shamal* set in on 25 March 2003, Iraqi commanders repositioned their forces using the weather as cover. However, Coalition ISTAR assets such as JSTARS allowed Iraqi movements to be tracked even under sandstorm conditions.⁴⁶ The prevalence of PGMs (sixty-eighty per cent of all munitions vs. ten per cent in 1991)⁴⁷ along with infra-red sensors and laser designators allowed air assets to precisely target Iraqi ground forces in all weathers and at day or night. This induced incapacitating fear in Iraqi troops as the Commanders of both Republican Guard I Corps⁴⁸ and the Al Nida Division described during post war interviews, the later describing how his Division dissolved in the face of Coalition air power.⁴⁹ Saddam's orders to his Air Force not to fight and the Republican Guard's unwillingness to fight clearly illustrate the successful deterrent and coercive effects of Coalition airpower on Iraqi forces.

The Public Relations Battle

The controversial and divisive nature of OIF meant that public relations and information would always have a significant role in the campaign, helping participating governments present their messages and influencing key audiences. The media and information battlespace of 2003 was very different from that in 1991. During the 1991 Gulf War, CNN introduced the concept of 'real-time' war with its twenty-four hour news coverage of the campaign. By 2003, the twenty-four / seven news concept had grown across the major western networks⁵⁰ but importantly now also included regional Arab networks such as Al Jazeera. The growth of the internet also created a new breed of independent journalist, able to transmit alternative messages to a global audience,⁵¹ free from the constraints of the official government line. In the context of the air campaign, such reporting provided a unique and personal view of events by individuals on the receiving end of the Coalition's precision strikes.

The immediacy of the news environment was a major challenge facing the Coalition in its efforts to influence public relations. As Sambrook noted, during the first Gulf War one or two editors had the luxury of checking facts and reaching judgements in order to present an accurate account of events; by 2003 they were not afforded that luxury. The general public of 2003 were entering the information chain far earlier than in 1991,⁵² making it even harder for officials to counter potentially damaging stories, requiring an innovative public relations approach.

The aim of the UK's information campaign was 'to influence the will of the Iraqi regime, the attitudes of its security forces and civilians as well as the regional audience, and to inform international audiences'⁵³ whilst the US position was a simple acknowledgement of the role that the media would play in shaping "public opinion now and in the years ahead."⁵⁴ The public relations strategy was centred on formal Press Information Centres (PICs) in theatre and the use of media personnel embedded directly with combat units (embeds). Whilst the PICs provided an overall appreciation of and context to the campaign, embeds provided a real time view of events on the front line directly to TV studios. As well as influencing domestic and wider public opinion, efforts to influence Iraqi military and domestic opinion through the use of a coordinated information operations campaign were vital, leading to descriptions of OIF being "a conflict in which information fully took its place as a weapon of war."⁵⁵

Assessing the Public Relations Battle

Against the background of widespread scepticism about the need for the war, the air campaign suffered from negative publicity before it began. Unfortunately, rather than focusing on its potential to shorten the war and minimise casualties, the concept of 'Shock and Awe' quickly turned into a public relations disaster.

Ullman's use of Hiroshima and Nagasaki to illustrate the principles of 'Shock and Awe' did nothing to pacify anti-war protestors who argued the air campaign would be little more than 'terror inducing destructiveness';⁵⁶ comparing it to the bombing of Guernica and Nazi Blitzkrieg

tactics.⁵⁷ Once the air campaign started the negative publicity continued, even extending to generally pro-war newspapers such as the Daily Telegraph with its headline 'Baghdad Blitz' alongside images of explosions in Baghdad.⁵⁸ Despite Pentagon officials' attempts to distance themselves from the concept of 'Shock and Awe',⁵⁹ and Ullman arguing that the air campaign was not actually about 'Shock and Awe',⁶⁰ significant damage had already been inflicted on the air campaign's image.

The public relations campaign was further weakened when elements of the media seemed to view the air war as little more than 'infotainment' or a video game. Having created the expectation of a decisive campaign, elements of the media began comparing the air war to an action movie or computer game, potentially trivialising what the Coalition were trying to achieve and prompting Colin Powell to warn that "this isn't a video game, it's a war. It's a real war."⁶¹ As well as Powell's criticism of the media coverage, the British Commander in theatre openly accused the media of turning the war into a spectator sport,⁶² effectively warning against the dangers of western populations sympathizing without suffering and empathizing without experiencing, thanks largely to media providing all the imagery and information necessary for its information-hungry audiences to develop a relatively shallow interest in events until the next stimuli appears.⁶³ Whilst sport and war share many sociological characteristics, they have key differences; for Bill Shankley football was more important than life and death, but for those directly involved on both sides of OIF, it was exactly a matter of life or death.⁶⁴ However, in aiming to satisfy the demand for twenty-four / seven news coverage, the resulting trivialization of the conflict was a serious set back to the credibility of the public relations and information campaigns.

Neither was the faltering domestic information campaign improved by the in-theatre information campaign and public relations strategy. There were some tactical successes to offset the weaknesses of the domestic campaign, with the use of capabilities such as the EC-130 Commando Solo aircraft to broadcast radio messages to both military and civilian populations, along with and radio broadcasts from HMS Chatham and USS Tarawa targeting southern Iraq combined with more traditional leaflet drops.⁶⁵ Such efforts served to undermine the Regime and encouraged desertion amongst both enlisted soldiers and importantly amongst some officers.⁶⁶ However, these tactical successes were effectively negated by operational level information and public relations failures linked to the air campaign's strike list and the Coalition's management of the Arab media. Regime media and propaganda targets were deleted from the strike list in the hope that they might be used to help facilitate Regime collapse. However, failure to restrict the Regime's propaganda capability simply allowed it to exploit Arab and Western media, providing it with a voice to the world⁶⁷ as well as demonstrating to the Iraqi people that Saddam was still in alive and in power.

However, the biggest public relations failure was potentially the Coalition's failure to effectively manage the media across Iraq and the broader Arab world. Despite an estimated 800

embedded media across the Coalition, there were no Arab embeds with UK forces and only one with US forces.⁶⁸ From a UK perspective, the primary target was the domestic audience, which needed to be influenced to help bolster support for the forces and the government.⁶⁹ Such attitudes towards Arab embeds meant that a significant opportunity to reinforce the Coalition's message was missed. In a campaign intended to liberate the Iraqi people, but about which many were sceptical, the failure to actively engage with the Arab media could only ever lead to Arab news agencies presenting their own independent views. The fallout from the Coalition's mishandling of the Iraqi and Arab media were editorials criticizing the Coalition's public relations campaign by condemning the western media's independence and credibility⁷⁰ along with damning Arab media interpretations of events such as the front page of the Saudi Arab News with its headline "Liberated by US bombs" alongside images of dead Iraqis.⁷¹ Whilst the Coalition media effort focused on a quick victory, the Arab media concentrated the human cost of the war, something the Coalition seemingly failed to grasp.⁷²

The general opinion of the Coalition campaign amongst Arabs was rooted in the concept of pan-Arab solidarity. Many Arabs demonstrated hatred for Saddam but sympathy towards the Iraqi people in equal measures and viewed the Coalition campaign as a war *against* Iraq rather than a war *for* Iraq. Although only one source,⁷³ an anonymous Baghdad resident known only as Salam Pax,⁷⁴ produced an internet blog which achieved international acclaim for its open and sometimes critical descriptions of the invasion and the effect that the air campaign was having in particular on the Iraqi people it intended to benefit:

*23/3 Today before noon I went out with my cousin to take a look at the city. Two things: 1) the attacks are precise. 2) they are attacking targets which are just too close to civilian areas in Baghdad ... There are no waving masses of people welcoming the Americans nor are they surrendering by the thousands. People are doing what all of us are, sitting in their homes hoping that a bomb doesn't fall on them and keeping their doors shut.*⁷⁵

*2/4 ... Two hours ago we could hear the rumbling of the planes over us and it took them ages to pass. Afraid is not the right word. Nervous, edgy, sometimes you just want to shout out at someone, angry. I wish the Iraqi and the American governments would stop saying they are doing this for the people. I also want to hold a "not in my name" sign ... Non stop bombing. At the moment the US/UK are not winning any battle to "win the heart and mind" of this individual. No matter which way this will go my life will end up more difficult.*⁷⁶

Whilst the Salam Pax blog was only one voice amongst the millions in Baghdad, it was heard by an international audience. Furthermore, as a voice of the people that the campaign aimed to liberate rather than an institution with an agenda, Salam Pax's experiences achieved a resonance across both the western media outlets, especially those with an anti-war agenda, but also across an already largely sceptical Arab world.

Against this background, the only way that an aggressive air campaign would be accepted was through an Arab face in much the same way that Saudi Arabia's Prince Khalid occupied a key position within the 1991 Coalition. In doing so, Prince Khalid effectively became the Arab face of the campaign and providing a degree of acceptability and credibility to a predominantly occidental force operating in the heart of the Middle East. However, the highly divisive nature of the 2003 campaign denied the Coalition the benefits of such a unifying Arab face. Ahmed Chalabi, a dissident Iraqi opposition politician, was arguably the closest the Coalition came to an Iraqi face; however, he was quickly discredited by, amongst other things, accusations by sections of Iraqi society that he was little more than a western stooge.⁷⁷ The Coalition's failure to appreciate the need to actively manage the Iraqi and regional Arab PR campaign created anger and resentment amongst the people the campaign was supposed to benefit. This anger quickly developed a physical form with ordinary Iraqis taking up arms against Coalition forces⁷⁸ along with the first signs of foreign fighters, who would later form a significant part of the insurgency, heading to Iraq.⁷⁹

Conclusion

As a standalone, independent strategic bombing effort, the air campaign was at best a qualified success. The attempted decapitation strikes failed in their objectives, highlighting air power's reliance on inconsistent intelligence to be effective, almost single-handedly corroborating one of Pape's key arguments, whilst years of attacks against the Iraqi air defences also failed to guarantee air superiority. But as a key component in an integrated multi-dimensional campaign, it showed that air power has a vital, war winning role and its success in OIF must be viewed in this context. This success appears, in part, to have been linked to an understanding of airpower and its capabilities amongst key planning staffs who noted what airpower had achieved in Afghanistan. When the capability developments since 1991, coupled with an appreciation of how they might be best utilised to support dynamic operations, were combined with the planning staff's flexible approach to airpower employment, it enabled Coalition forces to maximise airpower's tactical effect which in turn conferred strategic benefits in a relatively quick campaign.

In doing so, it further brings into question how relevant Pape's arguments are in the context of the OIF air campaign which was never about large scale attacks on population centres and Iraqi's military-industrial infrastructure. Where Pape is correct is in his scepticism of some of the more definite claims about airpower's ability to independently deliver campaign success.⁸⁰ However, the OIF air campaign showed that air power rather than being as simple as a blunt instrument or a rapier,⁸¹ is an instrument of policy that is most effective when its capabilities are clearly understood and matched to specific operational requirements. In this respect, the OIF air campaign clearly demonstrated that it is the consequences of airpower's employment that should be considered in a strategic sense rather than the capability itself. The OIF air campaign, simultaneously executed across all levels of warfare, as well as across geographic and temporal boundaries effectively raised questions as to whether previous absolute

theories on airpower's strategic utility are still relevant to complex, non-linear twenty-first century campaigns.

However, if the Coalition demonstrated a thorough understanding of the application of air power, they demonstrated a poor understanding of how to effectively influence public opinion – most importantly that of the sceptical population on whose behalf they were allegedly fighting. The advent of mass, uncontrollable media effectively opened another front, but in a virtual rather than a physical war, a front where success is based not on military capabilities but on perceptions and the integrity of the message being disseminated. The Coalition's handling of the regional Arab media and information campaign failed to recognise the importance of this key centre of gravity to the overall success of the campaign. Or rather, if as Tatham⁸² and Rantapelkonen⁸³ suggest that Coalition leaders did actually recognise the importance of the local rather than domestic public relations and information campaigns, good intentions appear to have become bogged down by operational security, mistrust and most importantly a misunderstanding of the local information environment. Although commenting on irregular warfare, Freedman's assertion that: "... superiority in the physical environment is of little value unless it can be translated into an advantage in the information environment..."⁸⁴ could have been written with the OIF air campaign specifically in mind. Thus, whilst the physical manifestation of the air campaign took weeks, the failure to effectively manage Iraqi and Arab sentiment had significant longer term implications. In this respect, the air campaign can only be described as a resounding military success but an information and public relations disaster.

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Book Reviews

Introduction by Wing Commander Chris Hunter

A contemporary view of the character of First Gulf War was that it was 'first and foremost an air power war and the RAF's contribution to the Allied air effort was significant and distinguished. The Service can take just pride in a remarkable feat of arms and a splendid professional achievement. However, that does not mean to say that we can learn nothing of significance from the conflict.' This statement could be viewed by some as a little contentious, but the Coalition's and UK's total losses were remarkably low (UK 45 deaths with 24 due to hostile action and 21 due to other causes), casualty figures that no one would have predicted on 16 Jan 91 the day prior to the start of the 42 day air and a 100 hr ground operation, also of significant scale, that both concluded on 28 Feb. The dominant, but not sole, factor that led to this result was the exploitation of air and space power.

However, prior to the start of air operations on 17 Jan 91 there was constant debate on how the War could and then, as forces built up, should be fought. Therefore, a deduction that the character of First Gulf War was an 'air power war' could only have been drawn after the event or at the earliest late during the planning process. The character of First Gulf War was not a pre-determined outcome with air operations planned and executed in glorious isolation, but the result of vigorous informed debate on the most appropriate means for winning the War within the available resources and capabilities.

First Gulf War represents a particularly useful case study of the planning and execution of such operations in support of a joint campaign. The books reviewed for this special edition of APR have been chosen to complement the ICBH Witness Seminar material and are a mix of academic and personal accounts. The personal accounts usefully provide the reader with an appreciation of the impact of 'friction', 'chance', and 'fog of war' throughout the conflict. The titles are broadly grouped into Strategic, Operational and Tactical perspectives and are listed in that order.

To set the Strategic context we have chosen: *Arab Storm*, *Desert Warrior*, and *The Generals' War*. *Arab Storm* is written from the privileged vantage point of the British Ambassador to Saudi Arabia and *Desert Warrior* complements that narrative by providing a Saudi view, one that we can too often overlook, and insight into Arab traditions and ways of doing things. The *Generals' War* delivers a vivid, comprehensive and honest US perspective and assessment.

At the Operational Level, in *War with Iraq: Critical Lessons* by General Buster Glosson offers a candid account of his experience during the planning and execution phases and how critical the air war was in setting the conditions for a successful and critically short ground war. For those whose knowledge of First Gulf War and air planning is limited this is a good place to start to broaden your knowledge. The *Heart of the Storm's* strength is a similar graphic, first-hand account of the initial planning. With *Strategic Air Power in Desert Storm*, *On Target*, and *The Iraq Wars and America's Military Revolution* providing the reader a deeper academic understanding of the key issues raised in the first 2 books.

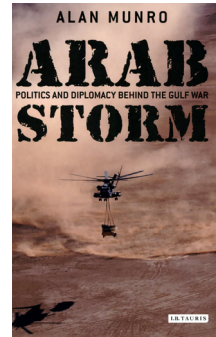
At the Tactical Level, *Storm Command* is General Sir Peter De La Billiere's personal account. Apart from being an excellent overview of the war and highlighting 'the importance of human beings in modern warfare', when it was published a few eyebrows were raised due to the content of pages 220-227, until that point highly classified operations. The final book, *Thunder and Lightning*, is included to mitigate the 'Video Game War' perception. It focusses on the human experience and shows that, for those that took part in the War, it felt nothing like a video game with a ubiquitous Scud missile threat to most airbases and field locations and a very real anti-air threat for those who flew.

There is something here for everyone in the Whole Force and just 2 or 3 well-chosen titles would provide the reader with a broad understanding of the War.

The Service's contemporary operational experience is dominated by Iraq, since 2003, and Afghanistan and this influences Defence's perspective on the planning and execution of air and space power operations. However, neither experience should necessarily be viewed a template for future conflict. These titles provide a broader perspective on the use of air and space power, which is important. By example the fight against Daesh should not be viewed as a simple extrapolation of the UK's counter insurgency experience. The defeat of that organization should start with an analysis of the character of conflict leading to an appropriate use of military force including air and space power, which will only occur through well-informed debate.

Book Reviews

Arab Storm: Politics and Diplomacy Behind the Gulf War



By Alan Munro

Publisher: I B Tauris & Co Ltd, 2005 (ISBN: 978-1845111281) 426 pages

Reviewed by Squadron Leader Angharad Boyson

Biography: Squadron Leader Angharad Boyson is an Operations Support (Fighter Control) officer, currently serving as a member of the Directing Staff in the RAF Division at the Joint Services Command and Staff College. She holds a postgraduate degree from City University, in addition to two first degrees.

Introduction

First published in 1996, with an updated preface for the 2005 paperback edition, Sir Alan Munro captures the events leading up to the Iraqi invasion of Kuwait in 1990 and beyond, from the privileged vantage point of the British Ambassador to Saudi Arabia. As the Kingdom of Saudi Arabia became host to half a million non-Muslim western soldiers, this book details some of the exceptional challenges to be overcome as Western and Arab states fought side by side, for the first time, against another Arab country. As the British Ambassador to Saudi Arabia from 1989 to 1993, Munro was in a unique position to see the interplay between the Kingdom and other members of the Gulf Co-operation Council, the Western nations and other Arab and Muslim countries around the world. Never before had an alliance such as this been formed and Alan Munro was at the heart of those machinations, with countries having to overcome their reservations to establish a lasting coalition that would see the removal of Iraq from Kuwait's soil.

In the first couple of chapters, Munro evocatively captures the mood of tension and ill-ease over Iraqi intentions and actions that led up to the unexpected invasion of Kuwait on 2 August 1990. Providing a pithy précis on the formation of Iraq post First World War, the context is set to explore how, despite the actions of her unstable leader, Arab nations were convinced that Iraq

would not undermine the Arab traditions and way of doing things. Speculating authoritatively on Saddam's personality and why he miscalculated so badly in both his timing and act of invading, the reader gains a good sense of the shock of Kuwait and Saudi Arabia at finding themselves at the unprecedented juncture and why there was no public response to the invasion from Saudi Arabia for nearly 3 days. King Fahd's mobilisation of the Arab League, readily available as Arab and Muslim foreign ministers were meeting in Cairo on the day of the invasion, saw a (bare) majority of nations voting to condemn the invasion. However, the support given to Iraq by Jordan, Yemen, the PLO, Libya and Sudan indicated that from very early on other nations may be called upon. The idea of an 'Arab solution' had been given a chance, but the Iraqi support from some nations gave cover and credibility to a wider international coalition.

As events move on, the book details the politics that invariably exist alongside the preparations for military involvement. Paraphrasing Clausewitz, Munro remarks 'If war is said to be the continuation of diplomacy by other means, our experience in Riyadh during the coalition offensive of early 1991 was to be the exception to the rule' (page 279). Much of the diplomacy that continued in this period was not established through Iraq or her leadership in an attempt to remove her from Kuwait, but rather with all of the other nations whose support, approval and cohesiveness was required to maintain a united front in condemning the actions of Iraq in her assault on the sovereignty of another Arab nation. Anyone with only a passing knowledge of the events of 1990 and 1991 will be fascinated by the insight to this behind the scenes dialogue. Those with a more thorough familiarity will marvel at the larger picture and of how much could have gone wrong even prior to the first of the coalition aircraft arriving in the Kingdom on 8 August 1990.

The contribution of this book to the plethora of information on the First Gulf War lies in the author's distinctive position within the Kingdom that hosted the coalition forces and was so instrumental in pulling together the disparate nations that formed it. At the same time, the Kingdom's more traditional and conservative elements of society had to be persuaded of the need for foreign, non-Muslim soldiers on their soil. Added to this, many of these forces were female (at one stage US female forces outnumbered the entire British contingent). From a western perspective, it might be difficult to see how these issues could have harmed the coalition's aim of getting Iraq to accept UN Resolution 678 for a complete withdrawal from Kuwait. However, had the Kingdom been unable to keep popular public support for the hosting of the coalition, not only would western forces been forced to seek alternative basing (which did not appear forthcoming) for their forces, the Kingdom could well have come under attack from the Iraqi forces arranged on the Kuwaiti border. It was a precarious balance for King Fahd to maintain, but maintain it he did and Munro gives a fascinating insight into how this was accomplished.

As for the British deployment, the Ambassador has some interesting observations on the RAF preparation (perhaps belying an Army perspective borne out of his National Service). 'On this first occasion a somewhat peremptory instruction, received in the embassy on the morning

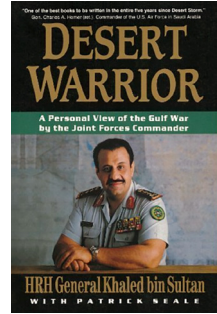
of 9 August, came in the form of a telephone call to the defence attaché, Peter Sincock, from the assistant chief of the air staff, requiring us to let the Saudis know the Tornados and their support staff would arrive the next day, to be based at Dhahran' (page 76). It adds flavour to the sense of the haste incumbent upon the coalition, where senior leaders (in this case King Fahd and Margaret Thatcher) had agreed courses of action that were being enacted upon before any of the necessary operational details were being organised.

A well-written, lengthy book, it does move back and forth in time as the chapters are divided by topic so the reader sees the same events again and again through a different lens. Whilst this can be confusing at times, it provides the opportunity to realise the different aspects of the same issue. For instance, whilst looking at the difficulties associated with establishing so many British troops in such short order, another chapter then examines how much easier this was made by the financial generosity of the Saudis. The US received \$13.5 billion, the UK \$1 billion and \$500 million to the French in the early months of 1991 alone, not accounting for the costs she was also picking up (which in the British case totalled some one third of the total cost of British military deployment).

Reading this book in the contemporary context of having operated in Afghanistan and the wider Gulf region for well over a decade, it seems ludicrous that the restrictions on the military involving alcohol, diet (in the avoidance of pork), entertainment and religious services were unexpected and problematic. But it is elements such as this that highlight how this conflict set the scene for what was to become a long-standing commitment in the region. For anyone seeking a wider understanding of both the First Gulf War and our continuing commitment to the region and on-going relationship with Saudi Arabia, Arab Storm is an excellent read.

Book Reviews

Desert Warrior: A Personal View of the Gulf War



By HRH General Khaled Bin Sultan

Publisher: HarperCollins Publishers, 1995 (ISBN: 978-0002556125) 364 pages

Reviewed by Group Captain (Retd) Ian Shields

Biography: Group Captain (Retd) Ian Shields retired from the RAF following a 32-year career that saw him command a front-line squadron and reach the rank of Group Captain. He now lectures at BA- and MA-level, and writes for academic and journalistic publications on current issues within defence and international relations; he also commentates on defence and security issues, specialising on aerospace matters. He holds post-graduate degrees from King's College London and Cambridge University, where he is currently researching for a doctorate.

Introduction

At the time of its initial publication, *Desert Warrior: A Personal View of the Gulf War* by the Joint Forces Commander received highly complementary reviews, not just as a memoir of war, but also for the insights it offered into the closed world of Saudi Arabia, and particularly of high politics within the Kingdom. Against the backdrop of current world events, as well as the anniversary of the Gulf War, it is timely to re-read and re-appraise this significant volume.

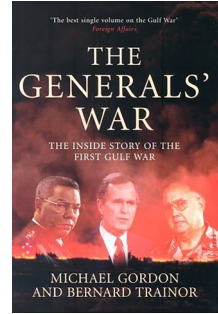
The book, co-written by Patrick Seale (a leading British Middle Eastern expert and author of several excellent books on the region) is a straightforward read. The General's writing style is one of no-nonsense, and his approach is temporal rather than thematic. The first quarter or so of the book is broad background and covers fairly conventional biographical detail, but does familiarise the reader with the author and his way of thinking. It becomes increasingly interesting as the General advances (rapidly – but then he does have the family connections requisite for Saudi society) to higher command. The bulk of the book covers his experiences and thoughts of the Gulf War as it unfolded, the aims of the Saudi ruling elite, and the fascinating relationship with the allied commanders, especially General Schwarzkopf. For the

war put the Saudi Royal Family in a difficult position: as the guardians of the two holiest sites in Islam (and thus, to a large extent, the self-appointed leaders of the faith) they were in a difficult position having seen a war between 2 states largely friendly to the Kingdom, having to rely on significant Western military assistance, and having to welcome the arrival of large numbers of non-believers into their country. It is when addressing issues at this Grand Strategic level that the book is most interesting, as much for what it does not say as for what it does. For, in its way, this is a very political book and is interesting as much for this aspect of the Gulf War as for the more conventional military recollections. The military aspects of the campaign, the major battles and the odd setback, are written very well and in a very straightforward, largely conventional style familiar to any reader of the memoirs of very senior officers, and especially to those familiar with land campaigns. The air campaign does receive its fair share of attention, although, with his Sandhurst training and Army background, it is unsurprising that this book concentrates primarily on the land campaign.

So has it stood the test of time? A guarded yes. Written fairly soon after the end of hostilities, it had the advantage of immediate memory and personal involvement, but also clearly lacked the longer perspective that time affords. It is, as a military memoir, conventional and highly competent, and offers some fascinating insights into national and regional politics. It is certainly an easy read, albeit that the style is perhaps a little too straightforward to maintain the reader's enthusiasm when trying to read prolonged sections of the book. One wonders to what extent this was a true collaboration between the General and Patrick Searle, or if it was more that the English journalist provided broad guidance on what would be well received in the West? Certainly not a vanity project for the General, but it was also clear that he would not, could not, fully open up about the inner working of Saudi Arabia. And it is this aspect of the book, the behind-the-scenes glimpses, that are the most tantalising but also the most revealing: the Kingdom was, and largely remains, closed. Indeed, where the book perhaps most shows its age and provenance, is when one considers what has happened in, and to, Saudi Arabia since 1995. This book, then, deserves its place among the canon on the Gulf War and has more than enough to offer for a re-read, or – indeed – a first-time perusal. It would, though, be fascinating to read an account of inner high politics since 1995 – and to read a true revisionist history of the Gulf War's High Command and their relationship with the benefit of 25 years of hindsight.

Book Reviews

The Generals' War: The Inside Story of the First Gulf War



By Michael Gordon and Bernard Trainor

Publisher: Atlantic Books, 2006 (ISBN: 978-1843543540) 477 pages

Reviewed by Wing Commander Mal Craghill

Biography: Wing Commander Mal Craghill is currently employed within Defence Engagement Strategy in the Ministry of Defence. A WSO(N), he has previously served as Deputy Chief and Chief of Strategy Division, AFCENT CAOC, Al Udeid, and as OC Air Warfare Centre.

Introduction

Viewed in isolation, the 1991 Gulf War was a stunning success. In response to the Iraqi invasion of Kuwait in August 1990, America assembled a huge multinational air, land and maritime force in the Middle East and within seven months had completed the biggest all-arms operation in decades to rout Saddam Hussein's forces and liberate Kuwait. Analysed in greater detail though, can the events of 1990 and 1991 be viewed as a success? In this fascinating and comprehensive volume, first published in 1995, Michael Gordon and US Marine Corps (USMC) Lieutenant General (retired) Bernard Trainor draw on interviews with key personnel and a mixture of classified and declassified US Government reports as well as studies, books and articles to draw out the detailed lessons of the Gulf War. They describe failings in US Government policy in the Middle East, inter-service rivalries between the branches of the US Military, breakdowns in the civil-military relationship and quarrels between senior military officers which badly affected the conduct of both DESERT SHIELD and DESERT STORM and led to what some viewed as an incomplete victory, with Iraq's military forces still a threat, and Saddam Hussein still in power.

Gordon has been the chief military correspondent on the New York Times for over 30 years, with assignments in Washington D.C., Moscow and London. Trainor served for 39 years in the USMC, fought in Vietnam, and held senior posts including Director of Plans and then Deputy Chief of Staff for Plans, Policy and Operations in the USMC Headquarters. He subsequently

became a military correspondent for the New York Times, and then Director of the National Security Programme at Harvard's John F. Kennedy School of Government. Together they have produced a valuable (albeit highly US-centric) volume of immense interest to any military historian or strategist, but of particular relevance to scholars of joint campaign planning and those (military and civilian) given the responsibility of high command.

Gordon and Trainor approach their work chronologically, beginning with an overview of the geopolitical context. They argue that America, preoccupied with the collapse of the Soviet Union and planning for a 'peace dividend' reduction in its military, misread Iraq's belligerence towards Kuwait, underestimating Iraq's economic problems following its long, attritional war with Iran. America believed that Iraq would respond to diplomacy and economic engagement, and thus neglected military deterrence even as Iraq's behaviour became ever more aggressive throughout 1990. The cautious approach of General Colin Powell, Chairman of the US Joint Chiefs of Staff (born of his Vietnam experience, and often codified as the "Powell Doctrine") and the lack of strategists in General Norman Schwarzkopf's somewhat under-resourced Central Command Headquarters are both cited as contributory factors.

With Kuwait overrun, the book turns to the assembly of a coalition force to defend Saudi Arabia and the planning of offensive operations to liberate Kuwait. The central themes which emerge here are of each Service championing their own agenda, and how Schwarzkopf's overbearing (if not bullying) command style led to subordinates withholding information and working in isolation both through lack of direction from him, and in fear of his explosive temper. Air planners seized their opportunity to champion the value of strategic bombing with precision weaponry to destroy the Iraqi regime and force a withdrawal from Kuwait without the need for a costly ground war. Army planners saw this as both unrealistic and a threat to their Service, conscious of difficult budgetary battles ahead, and set about assembling a sizeable invasion force to retake Kuwait – which would inevitably draw air component assets away from strategic bombing to target the Iraqi Army, and particularly the well-equipped Iraqi Republican Guard Corps (IRGC). The USMC was eventually ordered into a largely land-based posture, but was determined to play a decisive, rather than diversionary, part in the plan; and the US Navy is described as being aloof and rather divorced from the overall planning effort.

The authors describe how Schwarzkopf allowed planning to continue in silos – against Powell's wishes – right through to the commencement of DESERT STORM and beyond, and how the lack of regular engagement between Dick Cheney (Secretary of State for Defense), Powell and Schwarzkopf meant that a clear strategy was never established and mistrust between these three key figures grew. Coupled with a lack of truly joint planning across the air, land and maritime components, this meant that America's first opportunity to test the doctrine of Air-Land Battle – fast paced, coordinated all-arms warfare designed to overwhelm an enemy – would not be given its best chance of success. Other key strands are well drawn out, including the absolute centrality (and, frequently, ignorance of) logistics considerations; the difficulties of operating with coalition allies; the perils of ignoring key strategic concerns such as the Scud

missile threat (with its potential to draw Israel into the war); and the importance of an accurate, fused and widely understood intelligence picture.

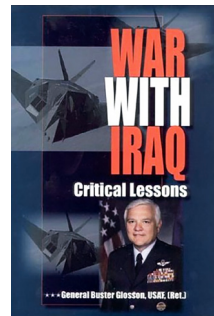
Once offensive operations to liberate Kuwait commenced, the authors describe how the lack of a joint planning staff came home to roost and how Schwarzkopf's refusal to establish a Joint Targeting Board, to adjudicate between competing target sets, was a key failing. Notable intelligence lapses are also highlighted: Iraq's desire to fight an attritional war and its inability to withstand superior coalition firepower, doctrine and training were missed; assumed knowledge of sea mine dispositions led to two capital ships being hit; and a lack of shared understanding of Iraqi capabilities, intent and morale led to wildly differing risk appetites between key commanders in the main US Army-dominated attack into Iraq. But perhaps the most significant lapse, Gordon and Trainor contend, was the decision to allow the USMC thrust into Kuwait to commence ahead of the Army's main attack through Iraq, designed to cut off Iraqi forces inside Kuwait. Almost inevitably, this resulted in a mass retreat of Iraqi forces which saw thousands of armoured vehicles (including much of the remaining IRGC) escape into Iraq before the coalition's main attack force could prevent them.

Even in victory, with Kuwait liberated, failings continued in the high command. A lack of post-war planning, President Bush's failure to give Schwarzkopf any riding instructions for the ceasefire talks, and Schwarzkopf's lack of political prowess left the Iraqi Government in a relatively strong position and led quickly to a brutal Iraqi suppression of the US-inspired uprising in Southern Iraq and the establishment, in 1992, of a no-fly zone over its southern provinces.

There are some themes not well drawn out by the book: the validity of competing approaches to air targeting are left largely unexplored; the need for a compelling political-military narrative, understood by all and infused throughout the planning process is underplayed; and the positive contributions of some coalition members are not well addressed. These do not, however, detract from the overall value of what is a vivid, comprehensive and honest assessment of the events leading up to, during and after the 1991 Gulf War. *Foreign Affairs* has described this as "The best single volume on the Gulf War", and the lessons it contains for high command, strategy formulation and operational planning are as relevant now as they were over two decades ago.

Book Reviews

War with Iraq: Critical Lessons



By General Buster Blosson, USAF (Retd)

Publisher: Carolina Gardner, 2003 (ISBN: 978-0972911702) 320 pages

Reviewed by Flight Lieutenant Alexander McKenzie

Biography: Flight Lieutenant Alexander McKenzie completed 9 years' service as an Intelligence Officer serving in various appointments with multiple deployments in Iraq and Afghanistan. He is now a reservist on 602 Squadron and Intelligence Manager with the Royal Bank of Scotland.

Introduction

General Buster Glosson offers a candid account of his experience during the planning and execution phases of operation DESERT STORM. Glosson, a Brigadier General during the war, was the architect-in-chief of the air campaign plan on behalf of the JFACC, General Chuck Horner. The account, published in 2003, frequently refers to his war diary and loses no impact from its retrospective perspective. The book offers specific insight into the 1991 campaign from the air components perspective and deliberately avoids any wider consideration of pre-war context or post-war choices. This narrow focus helps to illuminate a number of key themes that this reviewer believes are ubiquitous in the field of conflict. The importance of command relationships, strength of character and fierce leadership, innovation and the exploitation of technological edge are prominent throughout the story. So too is the inherent friction in war, generated by attempts to exert operational control from distant capitals (mainly Washington), unpredictable weather and old fashioned human error.

Glosson was clearly driven by his experiences as a young fighter pilot in Vietnam and sought to do all he could to avoid a repeat performance in the middle east. Throughout the book you get the sense that he truly believed the combination of superior coalition technology, advantageous battlefield terrain and an inferior military adversary allowed him to unleash air power in a manner never before attempted. Glosson regularly refers to Billy Mitchell, whom he

believed captured the essence of air power, and detested old-fashioned 'attritional' thinking about using the air component to 'roll back' Iraqi forces. Glosson also reveals a profound dislike of war, no doubt another insight into his Vietnam experience, and viewed air power as the means to achieve national objectives in the most efficacious manner with the minimum loss of American life.

This approach contrasted with that of his contemporary, the well known theorist Col John Warden whose detached analysis and methodological approach to targeting and campaign planning did not sit well with Glosson. As a proponent of the fundamentally human nature of warfare, Glosson assessed the Warden approach as being oblivious to the catastrophic psychological effects he sought to deliver on the Iraqi leadership. Indeed Glosson was responsible for sending Warden back to Washington and relying instead on a team of planners who themselves would go on to 2 and 3 star appointments in future years, David Deptula being the most notable. Glosson summarised his approach with the maxim that 'mass is the past, we live in a precision world'. This mentality allowed him to exploit the capability of stealth and precision targeting, embodied in the F117, to simultaneously combine time and space in a strategic air campaign that satisfied the objectives of Commander in Chief, General 'Stormin Norman' Schwartzkopf.

The relationship between the CinC and Glosson is prominent throughout and it is clear that the relationship was both well defined and mutually clear. General Colin Powell's role as the Chairman of the Joint Chiefs of Staff is painted in a less complimentary manner and Glosson repeatedly criticises attempts to control the air campaign, specifically target selection, from Washington. The importance of leadership is another theme that appears regularly. Glosson advocated that the American-led coalition outperformed Iraqi counterparts as leaders at every level, from the President down to flight leaders. Glosson himself noted the importance of 'pressing the flesh' with commanders and ensuring that squadrons understood both their mission and how that fitted into the larger campaign picture. Contemporary military commanders clearly respected Glosson's firm grip on the air campaign and it is interesting to note that he is well regarded in the memoirs of General Sir Peter de la Billière and others.

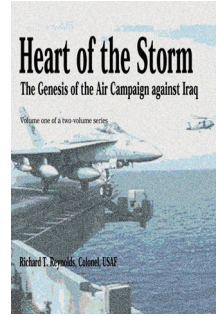
Whilst the air campaign was undoubtedly a huge success (he notes the first night went beyond the expectations of anything imagined by commanders in previous wars, de la Billière called it 'a masterpiece of human planning and computer-controller aggression'), Glosson also casts light on numerous problems and points of friction that frustrated his command of the 14th Air Division. The in-theatre intelligence machinery was regularly castigated from conceptual and technical angles. However Rear Admiral Mike McConnell, the Pentagon J2 is described as a saviour whose staff provided vital reach-back capability. The unpredictability and immovable reality of weather also features as a concern for Glosson, blunting the technological edge he wished to wield. Operational distractions are described with regularity, from concerns about disproportionate efforts allocated to scud-hunting to problems surrounding tactical execution of the ATO. Glosson regularly worried about being dominated by an activity cycle and felt that generating 'time to think' was vital to the successful resolution of these issues. This theme

perhaps resonated most strongly, along with his demand that key planning staff were given the latitude to come up with innovative ideas in order to avoid the pitfalls of complacency.

Overall the book offers a unique insight into the challenges of operational command and the process of planning and executing a conventional air campaign. Glosson's account highlights how critical the air war was in setting the conditions for a successful and short ground war. It also sheds light on inter-service rivalry and the importance of command relationships at the most senior levels of a war fighting military. It would have been interesting for Glosson to provide deeper reflection on the ethical considerations that affected him, particularly in relation to the decimation of retreating Iraqi forces on the 'Basra Road', and his perception of the wider effects of the bombing campaign. However the book is not diminished by any lack of consideration in this regard and accurately reflects the operational focus on Coalition Air Power achieving decisive force against the Iraqi military in 1991.

Book Reviews

Heart of the Storm: The Genesis of the Air Campaign Against Iraq



By Richard T Reynolds

Publisher: University Press of the Pacific, 2002 (ISBN: 978-0898758221) 176 pages

Reviewed by Group Captain John Alexander

Biography: Group Captain John Alexander is the Naval and Air Adviser, Islamabad. An RAF Regiment officer, his specialisation in short-range air defence and air-land integration included service in the Falkland Islands in 1982, the Gulf in 1990/91, Iraq in 2003, command of 37 Squadron RAF Regiment, and culminated as Chief Air, Headquarters Allied Rapid Reaction Corps. He has twice been a CAS' Fellow.

Introduction

Reynolds' *Heart of the Storm* is a narrative of the first twenty days of DESERT SHIELD in August 1990 and the struggle to design an air campaign. Air power's flexibility and reach, two of its defining attributes, have led to perennial arguments over whether its use should be strategic or tactical in focus and therefore what targets air power should attack. This argument resurfaced within hours of Saddam Hussein's forces' invasion of Kuwait on 2 August 1990 when an unready US Administration, Pentagon and Central Command struggled to work out how to stop Saddam's forces if they invaded Saudi Arabia, as was feared. The USAF Air University commissioned the research for this short book immediately after the Gulf War to tell the story of this struggle. Its author was a historian and serving colonel who had access to the USAF participants.

This book tells how the CENTCOM commander, General 'Storming Norman' Schwarzkopf, with few forces in Saudi Arabia and no plan, asked the Pentagon Air Staff to plan a 'strategic bombing campaign aimed at Iraq's military' to coerce Iraq into withdrawing if it did move into Saudi Arabia. The Vice Chief of Staff of the Air Force tasked Colonel John Warden, head of the Air Staff's Checkmate planning team, to plan an operation based on Operation EL DORADO CANYON, the US air attack on Libya's leadership in 1996. Warden, a renowned

proponent of strategic air power and author of the *The Air Campaign: Planning for Combat*, planned a campaign based on his five-rings model, to attack leadership, systems essential to the leadership, infrastructure, the population and fielded military forces. But as Reynolds' account contends, there was much disagreement within USAF, and particularly with Warden's concept of independent strategic air operations because it was counter to the doctrine of Air-Land Battle in which air power had a supporting role. Hence, the USAF's Tactical Air Command argued US air power should be used tactically to attack Saddam's fielded forces only. Many, including General Colin Powell, the Chairman of the Joint Chiefs, and others in the Administration, were also concerned that a strategic air campaign would lead to unlimited war with Iraq, counter to President Bush's desire for a limited war.

The book's strength is its graphic, first-hand account of the initial planning. Readers who have worked in US-led Headquarters since 1990 will recognise the atmospherics of competing generals, the politics, the patronage, the ceaseless battle-rhythm, briefings and slide packs, and will be able to smell the coffee. For readers who have not the book is a great induction. The book culminates with Warden's team briefing the Central Air Force Commander, and commander of CENTCOM Forward, Lt Gen Chuck Horner in Riyadh on 20 August. In the words of John Olsen, Warden and Horner were 'far apart both intellectually and emotionally'. Horner was focused on the Iraqi Army and Warden on Baghdad. Horner was suspicious that Warden represented Pentagon interference. Warden's brief went badly, and, in a remarkable scene, Horner ends up sarcastically playing to his staff, saying he wanted to keep some of Warden's team in Riyadh to help with Horner's plan but not Warden himself. Warden is sent back to the Pentagon.

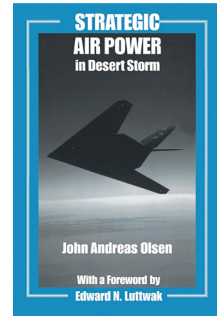
The book's weakness is that it's a partisan account with little analysis. Indeed the book opens with a note by the commander of Air University expressing his 'deep concern about the way people are characterised by the author', many of whom were still serving when the book was originally published. He criticises the book as reading like a Tom Clancy novel. The book's hero and central character is John Warden. The villains are various senior officers, particular those from Tactical Air Command. The book introduces controversies but without explaining them. These include the air campaign lessons senior USAF officers had internalised from Vietnam, the tensions between the unlimited war of Warden's strategic campaign and a limited war of a tactical, defensive, Air-Land Battle. The book's epilogue mentions that the Desert Storm campaign did include a strategic element but it's unfortunately outside the book's scope to explain how.

The book is a worthwhile read if the reader keeps these flaws in mind because it illustrates the challenges Warden faced. But the reader looking for a fuller and dispassionate analysis of the radically innovative strategic and operational application of air power in 1991, and the complex inter-relationships between the Administration, Pentagon and Central Command, should read John Olsen's *Strategic Air Power in Desert Storm*, also reviewed in this addition. Furthermore *Airpower Reborn: The Strategic Concepts of John Warden and John Boyd*, edited

by Olsen and reviewed by Air Cdre Byford in the 2015 CAS' Reading List, looks beyond the dominant land-centric, battlefield orientated model that Warden was up against, putting the arguments for a strategic air campaign both in historical context and the context of 21st Century conflict.

Book Reviews

Strategic Air Power in Desert Storm



By John Andreas Olsen

Publisher: Taylor & Francis Ltd, 2003 (ISBN: 978-0714681955) 344 pages

Reviewed by The Reverend Dr (Squadron Leader) David Richardson

Biography: The Reverend Dr (Squadron Leader) David Richardson is a graduate of the universities of Edinburgh, Belfast, Trinity College Dublin and King's College London, and a contributor to the Cambridge Dictionary of Irish Biography. Ordained in the Church of Ireland, he has served 10 years as a chaplain in the RAF at Lyneham, Odiham, Amport House and Halton. Operational experience includes two tours of Afghanistan and a recent deployment on Op SHADER, working with both air force elements in Cyprus and training teams in Iraq.

Introduction

A quarter of a century ago, the kaleidoscopic night skies over Baghdad seemed to mark the beginning of a new era for strategic air power. In this volume, Royal Norwegian Air Force colonel and visiting professor at the Swedish Defence University John Andreas Olsen sets out the chain of events which brought the bombers over Saddam's capital, and assesses the outcome. The book is divided into five main parts; looking at the strategic context of the conflict, the doctrinal development of US air power, the evolution of this doctrine into practical planning, the structure of the Iraqi regime, and the results of the bombing campaign. Olsen's thesis, simply put, is that American air power had essentially become a tactical adjunct to land forces during the Cold War period, and Operation Desert Storm marked a step change to a more strategic stance. He singles out the zealous activity of Colonel John Warden in blending the Clausewitzian concept of centres of gravity with the capabilities offered by modern air power. Set out in his famous '5 rings model', Warden believed that 'strategic paralysis' could be induced by directly attacking the leadership structure of an enemy nation – a significant departure from the existing American doctrinal view of aircraft supporting armour on a battlefield. This is far from a hagiographical account, however, and both the weaknesses and strengths of the colonel's thinking are

explored. Olsen teases out how Warden struggled to have his views accepted within the US military establishment, and how the doctrinal purity of his concept was altered as the strategy of DESERT STORM developed. Although Olsen's account of Warden's odyssey requires close reading given the complexity of the issues at stake, it is worth persisting with. To put it mildly, Warden's single-minded advocacy of strategic air power did not always accord with the views of the theatre air commander, General Horner. Olsen nicely illustrates the key roles of General Buster Glosson and Warden's deputy David Deptula in ensuring that at least some of the master's teaching was implemented alongside the more conventional demands of battlefield support.

A key strength of Olsen's book is the equal care that he takes in describing the Iraqi regime as it stood in 1991. In a fascinating account of the Hussein power base, he sets out the various layers of political and tribal complexity, which lay behind the 1990 invasion of Kuwait. Crucially, Olsen argues that Warden's failure to grasp the unique nature of Saddam's rule compromised the ultimate effectiveness of his planning. The balance of military, Ba'ath Party, and Tikriti tribalism that made up Saddam Hussein's authority 'offered an enormous durability and survivability' (p.222), resistant even to the smartest of bombs. Key regime assets such as the Republican Guard were effectively ignored by planners and remained intact to support Saddam's authority.

Nonetheless, Olsen concludes that the air campaign in 1991 had a significant effect. Coalition air strikes focusing on the command and control network of the Iraqi regime effectively degraded the efficiency of Saddam's government and undermined the morale of his forces, contributing materially to the success of the war. Indeed, Olsen suggests that by early February 1991, the air war alone had convinced Saddam to begin consideration of a withdrawal from Kuwait.

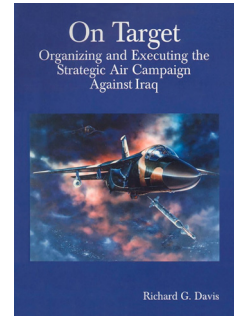
The ultimate issue of the campaign, however, was the lack of a grand strategy for the region. Warden and his team had looked beyond the immediate issue of an Iraqi army occupying Kuwait and envisaged the possibility of an air campaign, which would root out Saddam's regime completely. However, this was hardly thought through comprehensively; as Olsen argues, 'the planners did not have suggestions as to how the regime should be overthrown beyond assuming that if they managed to paralyse the regime such an outcome was inevitable' (p.291). The nature of the Hussein regime was such that any possible political alternative had been effectively quashed. The Washington political establishment was, however, even more vague as to what the post- ceasefire future might be - the result being that Saddam remained in power for over a decade longer, bloodied but relatively unbowed.

This strategic evaluation is perhaps the key recommendation to reading Olsen's book. Purchasers expecting a bomb-by-bomb account of the conflict will be disappointed - what this volume offers rather is a thoughtful statement of the need to link political thought to the potential of air power. Whilst Warden's work may have ensured that strategic air power came to the fore once more, his concepts were largely developed 'in a political and military vacuum' (p.293). With an inadequate understanding of the enemy state, and an opaque vision of the

post-conflict world, strategic air power could only achieve a limited amount. Twenty five years on, this volume remains a salutary reminder of that to a new generation of air power practitioners.

Book Reviews

On Target: Organising and Executing the Strategic Air Campaign Against Iraq



By Richard G Davis

Publisher: University Press of the Pacific, 2005 (ISBN: 978-1410219848) 404 pages

Reviewed by Group Captain Phil Lester

Biography: Group Captain Phil Lester is currently Station Commander of RAF High Wycombe. An RAF Regiment officer, he has served in staff and command tours in the UK and Germany, including with US EUCOM. Operational experience includes deployment on Op TELIC. He is a CAS' Fellow and an active member of the RAF's Centre for Air Power Studies Advisory Group.

Introduction

"A strategic bombing campaign must answer 3 fundamental questions: Did it expend its efforts on targets vital to the enemy's conduct of the War? Did it select targets vulnerable to friendly air action? And, did it contribute decisively to the overall success of the air, ground and sea operations and to the national political objectives? For air power in the Gulf War the quick answer to all 3 is 'yes'!"

Richard G Davis has written an exceptionally clear and incredibly valuable account of the political, strategic and operational perspectives and juxtapositions surrounding both the organisation and delivery of the strategic air campaign against Iraq in 1991. To do so he has drawn on a multitude of interviews of those involved in the campaign as well as analysing a plethora of planning documents, plans and operational assessments. To help him bring this account to life and contextualise it against other strategic campaigns he has drawn on his 20+ years with the United States Air Force Air Staff History Branch where he has focused on strategic bombing and the role its commanders. The result of this painstaking research is an extremely well-written narrative and critical assessment of the

many facets behind the 20th Century's last and arguably most conclusive example of successful strategic bombing.

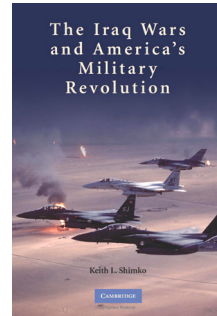
Davis set out to provide a critical account of the strategic imperatives of the campaign and the associated inter- and intra-Service challenges and tensions. He also constructed an argument, while demonstrating the successful strategic campaign against Iraq, that air power can seldom operate in isolation to other components. He also weaves into this narrative many of the prevailing and competing debates of the day while providing a useful handrail to the various doctrinal stand points. Davis succeeded in his goal and has shown how air power, from a standing start, can be configured, mission-prepared, deployed, integrated and deliver strategic effect within weeks of Kuwait's annexation by Iraq. The book also serves as a very useful datum for how air power could be utilised to deliver a responsive deterrent effect to many of the challenges we face today. From a personal perspective, I found the chapter on the Offensive Air Campaign to be particularly satisfying as it laid bare, in chronological order, the development of Instant Thunder and the key role played by the now renowned characters of Warden and DePuy and the challenges that they faced from the conventional wisdom of General Horner and his operational headquarters. If nothing else, the chapter reaffirmed in my mind the planning mantra of 'ownership' of the plan and the planning process by the commander and not the staff. Similarly the closing chapter, entitled 'Assessment' not only provided a clear account of the key factors behind the successes of the air campaign but it set these against much analysed and critiqued successes and failures of strategic air operations in the Second World War, Korea and Vietnam.

'On Target' is a balanced and sequenced account demonstrating the fundamental tenet of air power planning - that is, Strategy to Task. Through this approach Davis has addressed many of the perennial arguments faced by air power planners at the operational and strategic levels from the genesis of air power in the First World War to the modern day. This book provides an exceptionally useful and thought-provoking reference of air power's potential for delivering strategic effect. However, it is clear from Davis' examination that such potential can only be realized fully if all involved in planning and execution understand strategic effect and have the appetite and patience to see it through! Therefore there is much to recommend in this book to all proponents of air power, political and military, especially for our brothers and sisters in the Army and Navy who would benefit from a clear and close analysis of this successful strategic air campaign. I will leave the closing statement to Richard Davis:

*"The strategic bombing campaign against Iraq was **a** decisive factor in the Coalition's defeat of Iraq. When joined to the tactical air effort against Iraqi forces in Kuwait, which consumed almost three-fourths of the total air effort, air power was **the** decisive factor in the Coalition's quick and almost bloodless victory in the Persian Gulf War."*

Book Reviews

The Iraq Wars and America's Military Revolution



By Keith L Shimko

Publisher: Cambridge University Press, 2010 (ISBN: 978-0521128841) 262 pages

Reviewed by Group Captain Shaun Harvey

Biography: Group Captain Shaun Harvey is the RAF Exchange Officer at the USAF Air University, Maxwell Air Force Base. Commissioned into the Engineer (Communications-Electronics) Branch, he has enjoyed a number of command and staff appointments in the UK and Germany, and has served in an exchange post in Headquarters USAF, The Pentagon. He has a First and two Masters degrees and is a CAS' Fellow.

Introduction

Keith Shimko is associate professor of political science at Purdue University in the United States. His primary areas of interest are international relations and security and his other works include *Images and Arms Control* about how the Reagan administration viewed the Soviet Union.

Debates about the so-called American "*Revolution in Military Affairs*" or RMA have raged ever since the World's television screens bore witness to the targeting cross-hairs of laser-designating aircraft and CNN news coverage of Tomahawk Cruise Missiles in the 1991 Gulf War. Now, and after the recent decade of focus on Counter-Insurgency (COIN) operations in the Middle East, there is a growing transatlantic focus on the challenges of a rising China and a return to the familiar ideas of geo-politics and the military advantages being offered by American technology. What has become known as the "Third Offset Strategy" seeks to sustain the US military's technological edge, albeit with significant capital investment. Thus, the issues Shimko discusses have particular relevance to American grand strategy and the current US policy of 'Rebalancing to Asia.'

Shimko delivers a well-researched, balanced and very readable book. It will be of significant interest to anyone wanting to understand the role of technology in contemporary combat,

the recent history of Western conflict in the Middle East, or those studying the changes in the American way of war since the the Vietnam War. Air power enthusiasts will find plenty of familiar but well-crafted examples of how technology has driven advantage in air and joint operations over the past two decades. Additionally, strategists will profit from its even-handed, if inconclusive, approach to the arguments over technology's role in national strategy.

This book begins by introducing the subject of the "Revolution in Military Affairs" or RMA; the post-modern extension of the arguments made by Geoffrey Parker on military innovation and the rise of the West.¹ Providing a succinct, yet familiar narrative, Shimko highlights the claims that RMA advocates make on the outstanding operational success the US demonstrated on Op DESERT STORM. He details the impact of modern technology such as stealth, precision guidance and networked information systems and proposes that these represent a radical change in warfighting. The next chapter discusses the importance of the Vietnam War on American defence planning and military thought. The legacies of Vietnam go some way to explain the momentum behind RMA; however, Shimko steers clear of investigating wider US strategy, including the important part played by ideas such as the Weinberger-Powell doctrine.

Later chapters are chronological and recount the history of America's contribution to Somalia and Kosovo, highlighting the continued essential contribution of airpower and C4ISR, its strengths and relative weaknesses. There is then coverage of the Iraq War from 2003, split into two parts. The first considers how America's technological advantage allowed the US-led coalition to remove the Iraqi regime so rapidly and with so few allied casualties. The second part describes the efforts to stem the insurgency and growing forces of civil war in Iraq as a wholly new context - a new war - in which the technological advantages of US forces were of limited value in achieving the mission.

Throughout, the book poses the same question: do the changes described in technology and warfighting represent a revolution in military affairs? The essential operational contribution made by technology is clear: the book concludes that the practices of warfighting, and major combat operations especially, have been significantly changed by the introduction of technologies such as stealth, precision guidance, C4ISR and the accompanying transformation in training, doctrine and supporting lines of development. Shimko contends that over the past twenty years, the character of warfighting has altered sufficiently to merit the label 'revolution.' However, beyond the operational level, the point is moot. Even where battlefield advantage is unequivocally demonstrated, no relationship is offered to the wars' political outcomes.

Shimko may also be wise not to have drawn any great conclusions from the Western experience of COIN Operations, as it may yet be too soon to assess the contributing roles of

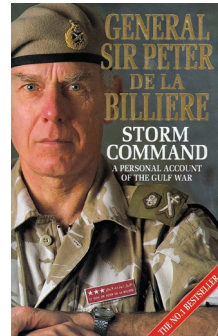
¹ Geoffrey Parker. *The Military Revolution: Military Innovation and the Rise of the West, 1500-1800*. (Cambridge: Cambridge University Press, 1988).

strategy and technology. Such an argument would also require the rigour of investigation into the strategic choices that the US and its allies made. He focuses instead on technological advantage and how that was achieved at the operational level, leaving the reader to speculate whether it is a fallacy to assume that one can solve the complex problems of future armed conflict through the exploitation of advanced technology alone.

Strategically incomplete it may be, but in *The Iraq Wars and America's Military Revolution*, Shimko produces an excellent discussion on how technology has transformed the operational level of war. This and the even treatment that he affords technology advocates and sceptics alike are the reasons this text was selected for the USAF Air War College Foundations of Strategy Course. This is an important and well-argued work on the technological advances that shaped the way we approach today's major combat operations. For that alone, it deserves its space on any airman's bookshelf.

Book Reviews

Storm Command: A Personal Account of the Gulf War



By Sir Peter de la Billière

Publisher: HarperCollins Publishers, 1993 (ISBN: 978-0006379690) 382 pages

Reviewed by Flying Officer Wayne Lovejoy

Biography: Flying Officer Wayne Lovejoy is an RAF Regiment officer with a background in Joint Tactical Air Control (JTAC). He is a CAS' Fellow and an active member of the RAF's Centre for Air Power Studies Advisory Group.

Introduction

Storm Command is General Sir Peter de la Billière's personal account of the first Gulf War in which he not only provides the reader with an excellent overview of the war but also uses it to highlight 'the importance of human beings in modern warfare'. He has an exceptional service record; gaining his commission into the British Army in 1952 he went on to serve in Japan, Korea, the Suez Canal Zone and Jordan. He then joined 22 SAS and saw subsequent service in Jebel Akhdar, Radfan and Borneo before commanding operations in Musandam and Dhofar. In 1981 he held overall military command during the hostage rescue at the Iranian Embassy in London. He has been awarded a Military Cross with an additional bar, CBE and KCB. His experience across all levels of warfare, combined with his position as Commander of British Forces in the Middle East during the First Gulf War, allows for an authoritative insight into the higher echelons of command during war.

In the preface the author states that the book is 'mainly for readers without a military background' however, it is equally pertinent for military personnel. A theme throughout the book is the emphasis placed on engaging with people. At one end of the spectrum he was meeting the rulers of Arab nations and at the other he was sleeping on the desert floor when visiting individual battalions. This approach allowed him to understand the situation from multiple perspectives, which resulted in extremely well informed decision making and an ability

to back brief Whitehall with a credible insight into the 'ground truth'. At the national operational level, he understood the need to be seen as the Commander of British forces and not simply as a high ranking Army officer and so he routinely visited all three services to engage with the senior leadership in theatre. By doing this he created a unity of effort for the forces under his command and this proved to be of the utmost importance as the war ensued.

This is not a book that attempts to lecture on any aspect of command or leadership and the early chapters that explain his thought processes in these areas quickly give way to tactical accounts of combat once the war begins. This is most noticeable in the chapter that recounts the ill-fated SAS patrol 'Bravo Two Zero' where the author's passion for his former unit is clear. When discussing tactical detail there is a slight shift in writing style as he talks of patrols being 'bounced' by enemy forces and troops 'bashing up'. The tales of individual and unit actions are numerous and some compelling examples of naval, ground and air combat are forged together to firmly illustrate the combined nature of this theatre of operations. It is undoubtedly due to the author's position during the war that he has such an insight to the actions of all three services, as well as special forces, which allows for the unique inclusion of finite detail originally captured in his letters home.

Other recurring themes are technology, the Press and cultural sensitivities. Technology is praised for the accuracy of the munitions, the ease of navigating with GPS and target acquisition using thermal sights. He acknowledges throughout that the effective employment of this technology is proportionate to the quality of training that individuals received in order to use it. He uses the fact that the Iraqis had some very good Soviet technology but were unable to use it due to lack of training to add weight to this argument. The Press had unprecedented access to events and they were able to report back to the UK in almost real-time, and this generated other concerns that had to be managed. By engaging with local leaders he identified the importance of cultural and religious sensitivities and ensured that commanders at all levels took responsibility for their troops' actions to avoid causing any offence. These issues are not over analysed, instead the book focuses on how he directed his subordinate commanders to deal with them. This gives further credibility to his original argument of 'the importance of human beings in modern warfare.' The now common idea that actions and decisions taken at the tactical level can have strategic consequences stems from these very issues. Other authors, such as General Charles Krulak, have analysed this concept of the 'Strategic Corporal' in much more detail, but that depth of analysis is not needed here. The actual significance of this book is that it provides many starting points for issues that would become extremely pertinent in future campaigns.

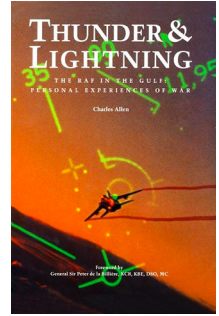
For younger military practitioners this book may seem a little aged as it was written in the language of the generation prior to the Global War on Terror. It refers to 'drones with cameras' and 'Iraqi kamikaze troops' and not the more modern terms of 'UAVs' and 'suicide bombers'. However, this language actually gives the book authenticity which is complemented with regular quotes from letters that he sent to his wife and gives the impression that he is writing from notes and not tainted memories. He often uses the terms 'our' and 'we' when talking about

British equipment or forces and this emphasises the fact that the book is a personal account rather than an academic analysis of events.

This book is one man's personal account of the first Gulf War but anyone interested in this era of warfare can take much away from it. With 45,000 British personnel deployed, it was the largest British military deployment since the Second World War and gives the reader a sense of the enormity of this operation. General Sir Peter de la Billière addresses the issues of technology, the Press and cultural sensitivities in war through stressing the importance of suitably preparing individuals. As a personal account it is easy follow, issues are not overly analysed and the human factor regularly comes across but, at the same time there are subtle lessons that can be taken away for operating in a conflict. To this end the book successfully achieves the author's aim and is certainly worth reading by people who either have an interest in the higher levels of warfare or want a general overview of this war.

Book Reviews

Thunder & Lightning – The RAF in the Gulf: Personal Experiences of War



By Charles Allen

Publisher: Sphere, 1995 (ISBN: 978-0751511307) 240 pages

Reviewed by Squadron Leader Nigel Jones

Biography: Squadron Leader Nigel Jones is SO2 Trg Pol A at No 22 (Trg) Gp. He is a CAS' Fellow, having graduated from King's College London's inaugural 'Air Power in the Modern World' Masters programme, and is an active member of the RAF's Centre for Air Power Studies Advisory Group.

Introduction

The preface to this book begins with some advice from the Duke of Wellington to an author who wished to write an account of the Battle of Waterloo, 'you may depend upon it you will never make a satisfactory work'. The reasons for this can be found in a letter that he wrote less than 2 months after the defeat of Napoleon 'The history of a battle is not unlike the history of a ball. Some individuals may recollect all the little events of which the great result is the battle won or lost, but no individual can recollect the order in which, or the exact moment at which, they occurred, which makes all the difference as to their value or importance.' We can today, however, construct a pretty accurate picture of what went on through eye-witness accounts, media reporting and the examination of the operational records from the campaigns, especially as we now have the tools to sort these vast amounts of information. This will only ever give a second hand account of events as, as Charles Allen states in the preface to this book, 'Only those who were there know what it was really like'. Well, in the word of that famous Welsh philosopher - Max Boyce, I can say 'I know because I was there'.

From my recollections, this book does a very good job of identifying and capturing those elements of the conflict which were shared experiences of all the airmen who took part.

It captures the atmosphere in the RAF prior to the Iraqi invasion of Kuwait. Just over 6 months previously the Berlin Wall had come down and the Cold War was coming to an end. There was talk of a Peace Dividend and the 'Options for Change' Defence Review, announced on 25 July 1990, had recommended the RAF be reduced from 89,000 to 75,000 personnel¹. The thoughts of Tornado GR1A aircrew of II (AC) Sqn, RAF Laarbruch concerning the possibility of redundancies were common to many of us in the early summer of 1990. These thoughts were quickly put on the back burner when Saddam Hussein ordered the invasion of Kuwait at the beginning of August and Western politicians decided that this act of aggression would not be allowed to stand. The book captures the massive scale of this effort which saw around 7,000 RAF personnel deploy to Saudi Arabia in support of firstly 'DESERT SHIELD' and then 'DESERT STORM' or what we knew as Operation GRANBY.

Thunder and Lightning uses a largely chronological structure which follows the initial response to the invasion. It covers the rapid deployment of the initial tripwire force, made up of Tornado F3s, RAF Regiment Rapier units and support elements such as Tactical Supply Wing, which was sent out to deter any Iraqi incursions into Saudi Arabia. It then details the steady 6 month build-up of force elements from right across the RAF looking at the deployments of Tornado GR1s, Jaguars, Buccaneers, Nimrod, AWACS, Victors, Hercules, VC10s, Tristars, Puma and Chinook. It also looks at the role played by the support elements such as the Movers, Medics, Suppliers and Regiment. The book details the individual and organisational effort that was required to put this force in place. The pre-deployment training and kitting process where everyone ensured they could 'mask in 9' and get an NBC suit on quickly and properly, as we all knew that Iraq had used chemical weapons. The extensive modification programme that went on at home units, and during the work up phase in theatre and in some cases continued during the conflict itself. The book does a good job of using the experiences of personnel to convey the urgency and sheer hard work that was required. It also covers the ingenuity of personnel in making the living conditions comfortable and includes how we all 'utilised' the support of the US forces, it reminded me of our supplier who managed to swap a pair of flying gloves for over 100 American cot beds.

When examining the conflict phase of the campaign from 17 January to 28 February 1991, the book draws on the experience and eye witness accounts of the personnel involved to give the reader some insight into what it was like to be there. The experience of the Tornado, Jaguar and Buccaneer crews, who were involved in the bombing of Iraqi airfields and Iraqi Army positions, is well told. The book also conveys the sense of relief all personnel involved in launching the aircraft felt when you heard them come back at night. I seem to remember the Brian Hanrahan phrase from the Falklands War about 'counting them out and counting them all back in' being used a lot. Sadly this didn't happen in all cases and effect of losing crews is well told through the words of their friends and colleagues.

¹ HoC Library (2010). *A Brief Guide to Previous British Defence Reviews*.
<http://researchbriefings.files.parliament.uk/documents/SN05714/SN05714.pdf>

Overall this book does a very good job of telling the story of the First Gulf War through the personal experiences of the RAF personnel who took part. It will rekindle the memories of those who served in the Gulf the experience of whom will also be familiar to those who have served in the campaigns since 1991. In many ways the 1991 conflict marked the sea change from the Cold War posture to the Expeditionary operations we prepare for now. This book captures that moment in time well.

Finally just a note on the different versions of this book. The earlier hardback copy came out in initially in late 1991 and is lavishly illustrated with over 150 photographs from all stages of the campaign. The paperback version was printed in 1994, has considerably less photographs, but has an additional page which acts as a preface which details the role of 7 Squadron's SF Flight during Op GRANBY. Either copy can be found for around £5 on leading booksellers websites, my preference would be for the hardback version as there are certain photographs which will evoke memories for anyone who was there.

<http://www.airpowerstudies.co.uk>

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