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RAAF AIR POWER CONFERENCE

AIR POWER & COERCIVE DIPLOMACY

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The Air Power Development Centre

The Air Power Development Centre (APDC) was established by the Royal Australian Air Force in August 1989 at the direction of the then Chief of the Air Staff. Originally known as the Air Power Studies Centre, it was renamed the Aerospace Centre in 2000 and then became the Air Power Development Centre in 2004.

Its function is to promote a greater understanding of the proper application of air and space power within the Australian Defence Force and in the wider community. This is being achieved through a variety of methods, including development and revision of indigenous doctrine, the incorporation of that doctrine into all levels of RAAF training, and increasing the level of air and space power awareness across the broadest possible spectrum.

Over the years the APDC has evolved into an agency that provides subject matter expertise for air and space power education, and has a well-developed publication program. Since 1991, the APDC has been responsible for the conduct of the Chief of Air Force Fellowship program in which selected members of the RAAF, and overseas air forces, undertake research in key air and space power issues which have direct relevance and applicability to Air Force.

The RAAF Historical Section was amalgamated with the APDC in 1997, and is now known as the Office of Air Force History.

Comment on these proceedings or inquiry on any other air power related topic is welcome and should be forwarded to:

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Preface

The papers contained herein are essentially as they were presented at the conference, with only minor changes to achieve some consistency in layout, spelling and terminology. The transcripts of the panel discussions that followed the presentations have been edited for relevance, clarity and brevity.

Copies of the edited papers and transcripts were sent to the authors for comment and endorsement before publication.

Keith Brent
Editor
Air Power Development Centre
Canberra

March 2013

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NOTES ON CONTRIBUTORS

AIR VICE-MARSHAL LEO DAVIES, CSC

Air Vice-Marshal Davies joined the Royal Australian Air Force as a cadet navigator in 1979 and graduated to fly P-3B and P-3C Orion aircraft with No 11 Squadron at RAAF Base Edinburgh in South Australia. In 1987, he underwent pilot training and after completing F-111 conversion course was posted in 1988 to No 1 Squadron at RAAF Base Amberley.

In 1990, Air Vice-Marshal Davies was posted to Cannon Air Force Base, New Mexico, to fly F-111D aircraft on exchange with the United States Air Force. On return to Australia in 1993, he was posted to No 1 Squadron as the Operations Flight Commander followed by one year as Operations Officer at Headquarters No 82 Wing during 1996. After a posting in 1997 and 1998 as the Executive Officer at No 1 Squadron, he completed RAAF Command and Staff Course. In 2000, he commenced two years in Capability Systems within Defence Headquarters.

In 2002 and 2003, Air Vice-Marshal Davies' long association with No 1 Squadron was again rekindled when he returned as Commanding Officer and achieved 2000 hours flying the F-111. He was Staff Officer to the Chief of Air Force during 2004 before taking up the post of Officer Commanding No 82 Wing at RAAF Base Amberley.

Air Vice-Marshal Davies worked as Director Combat Capability within Air Force Headquarters in 2006 and 2007, during which time he was deployed to the Middle East to work within the Combined Air Operations Centre. In 2008 he was appointed Director General Capability Planning within Air Force Headquarters until 2010, when he was posted to Washington as the Air Attaché.

In June 2011, his future appointment as Deputy Chief of Air Force was published. He commenced this position in January 2012 on his return from Washington.

Air Vice-Marshal Davies is married to Rhonda, who is a registered nurse, and they have two children; Erin, who is herself a registered nurse (midwife), and Jacob.

THE HON. STEPHEN SMITH, MP

Stephen Smith was sworn in as Minister for Defence on 14 September 2010. Prior to that, Mr Smith was Minister for Foreign Affairs and Trade from 28 June 2010 and Minister for Foreign Affairs from 3 December 2007.

Mr Smith was born in Narrogin, Western Australia and spent his early years in Narrogin and Southern Cross. He received his secondary school education at Christian Brothers High School Highgate in Perth.

Mr Smith is a barrister and solicitor by profession. He completed his Bachelor of Arts and Bachelor of Laws at the University of Western Australia. Mr Smith practised as a barrister and solicitor in Perth, then completed a Master of Laws at London University, and subsequently lectured and tutored in law in London.

From 1983 to 1987 Mr Smith was Principal Private Secretary to the Attorney General of Western Australia. From 1987 to 1990 he was the State Secretary of the Western Australian Branch of the Australian Labor Party.

During 1991 and 1992, Mr Smith was Special Adviser to the Prime Minister of Australia and Senior Adviser to the Deputy Prime Minister and Treasurer of Australia, Paul Keating.

Mr Smith has been the Federal Member for Perth since March 1993.

Prior to his appointment as Foreign Minister, from 1996 until 2007 Mr Smith held a range of Shadow Ministerial positions including Shadow Minister for Trade, Shadow Minister for Resources and Energy, Shadow Minister for Communications, Shadow Minister for Health, Shadow Minister for Immigration, Shadow Minister for Industry, Infrastructure and Industrial Relations and Shadow Minister for Education and Training.

Mr Smith and his wife Jane live in the electorate of Perth and have two teenage children, a son Hugo and a daughter Madeleine.

Mr Smith enjoys watching cricket and hockey.

Dr Chris Clark

Chris Clark has been a prolific contributor to Australian military history for over 30 years, writing more than 20 books along with chapters and articles for numerous others. In the field of Australian air power history, he wrote the definitive history of the early RAAF until the start of World War II (*The Third Brother*, Allen & Unwin, 1991) and a volume of *The Official History of Australia's Involvement in Southeast Asian Conflicts 1948–1975* (*The RAAF in Vietnam*, Allen & Unwin, 1995). As RAAF Historian since 2004, he has also been instrumental in the publication of a considerable volume of books, memoirs and other studies from the Air Power Development Centre. He is a Visiting Fellow (Associate Professor) in the School of Humanities and Social Sciences at the Australian Defence Force Academy, from which he was awarded his PhD in 1991.

Air Marshal Geoff Brown, AO

Air Marshal Geoff Brown joined the RAAF in February 1980 after completing an engineering degree. He graduated from No 111 Pilot's Course in 1981 and was initially posted to No 12 Squadron at Amberley to fly Chinooks. After three years at 12 Squadron he was posted to No 2 Flying Training School, Pearce, and spent 18 months as a flying instructor before being posted to Central Flying School (CFS),

East Sale, in 1986. While at CFS, he was a member of the Roulettes from 1987 to 1989. He led the last Macchi team before they transitioned to the PC-9.

In 1990, Air Marshal Brown was posted to Williamtown for a Hornet conversion and then completed a short tour at No 77 Squadron. On promotion to Squadron Leader in 1991, he was posted to No 75 Squadron, Tindal, as a Flight Commander.

In 1993, Air Marshal Brown was then posted to 77 Squadron as Executive Officer. He completed RAAF Staff College in 1995 and was subsequently posted to Headquarters Air Command as Staff Officer Operational Evaluation.

From 1997 to 2000, Air Marshal Brown commanded No 3 Squadron. He then completed F-111 conversion and assumed the position of Officer Commanding No 82 Wing in December 2000. In 2003 he commanded all F/A-18 and C-130 operations in Operation *Iraqi Freedom* and was appointed a Member of the Order of Australia (AM) and awarded a Legion of Merit for his service in the operation. He was Officer Commanding Airborne Early Warning and Control Systems Program Office from June 2003 until December 2004, and spent 2005 at the Centre for Defence and Strategic Studies. He then commanded Air Combat Group throughout 2006. From January 2007 until June 2008 he was Director General Capability Planning in Air Force Headquarters. Air Marshal Brown was the Deputy Chief of Air Force from 30 June 2008 to 3 July 2011, and was appointed Chief of Air Force from 4 July 2011. He was appointed as an Officer of the Order of Australia (AO) in the 2012 Australia Day Honours List.

Air Marshal Brown has over 5000 hours in military aircraft.

He lives in Canberra with his wife Amanda and his two sons, Ryan and Jake. His sporting interests are gliding and motorsports.

PROFESSOR AMIN SAIKAL

Amin Saikal is Professor of Political Science and Director of the Centre for Arab and Islamic Studies (the Middle East and Central Asia) at the Australian National University.

Professor Saikal has been a Visiting Fellow at Princeton University, Cambridge University and the Institute of Development Studies (University of Sussex), as well as a Rockefeller Foundation Fellow in International Relations (1983–1988). In April 2006, he was appointed a Member of the Order of Australia (AM) for service to the international community and to education, and as an author and adviser. He is also a member of many national and international academic organisations, and the author of numerous works on the Middle East, Central Asia, and Russia. His books include: *Modern Afghanistan: A History of Struggle and Survival* [new updated edition], I.B. Tauris, London, 2012; *The Rise and Fall of the Shah: Iran from Autocracy to Religious Rule*, Princeton University Press, Princeton, 2009; *Modern Afghanistan: A History of Struggle and Survival*, I.B. Tauris, London, 2006;

Islam and the West: Conflict or Cooperation?, Palgrave Macmillan, Basingstoke, 2003; (co-editor) *American Democracy Promotion in the Changing Middle East*, Routledge, London, 2012; (editor) *The Afghanistan Conflict and Australia's Role*, Melbourne University Press, Carlton, 2011; (co-editor) *Democratization in the Middle East: Experiences, Struggles, Challenges*, United Nations University Press, New York, 2003; (co-editor) *The Soviet Withdrawal from Afghanistan*, Cambridge University Press, Cambridge, 1989; (co-editor) *Russia: In Search of its Future*, Cambridge University Press, Cambridge, 1995. Professor Saikal has also published many articles in international journals, as well as numerous feature articles in major international newspapers, including *The International Herald Tribune*, *The New York Times*, *The Wall Street Journal*, *The Guardian* and *The Globe and Mail*. He is also a frequent commentator on radio and television.

Professor Ramesh Thakur

Ramesh Thakur is Professor of International Relations in the Australian National University's Asia-Pacific College of Diplomacy, and Adjunct Professor in the Institute of Ethics, Governance and Law at Griffith University. He was Vice-Rector and Senior Vice-Rector of the United Nations University (and Assistant Secretary-General of the United Nations) from 1998 to 2007.

He was a Commissioner and one of the principal authors of *The Responsibility to Protect*, and Senior Adviser on Reforms and Principal Writer of Secretary-General Kofi Annan's second reform report. His related books include *The United Nations, Peace and Security: From Collective Security to the Responsibility to Protect*, (Cambridge University Press, 2006); *Global Governance and the UN: An Unfinished Journey*, co-written with Thomas G. Weiss (Indiana University Press, 2010); *The Responsibility to Protect: Norms, Laws and the Use of Force in International Politics* (Routledge, 2011); *Blood and Borders: The Responsibility to Protect and the Problem of the Kin-State*, co-edited with Walter Kemp and Vesselin Popovski (United Nations University Press, 2011); and *The People vs. the State: Reflections on UN Authority, US Power and the Responsibility to Protect* (United Nations University Press, 2011).

His next major project is *The Oxford Handbook of Modern Diplomacy*, co-edited with Andrew F. Cooper and Jorge Heine (Oxford University Press, forthcoming).

Professor Bruce W. Jentleson

Bruce Jentleson, Professor of Public Policy and Political Science at Duke University, is both a leading scholar of American foreign policy and has served in a number of US policy and political positions. From 2009 to 2011 he was Senior Advisor to the U.S. State Department Policy Planning Director. He also served as a senior foreign policy advisor to Vice President Al Gore in his 2000 presidential campaign, in the Clinton administration State Department (1993–94), as a foreign policy aide to

then-Senator Al Gore (1987–88), and in the 2008 Obama campaign as a member of the Phoenix Initiative and a co-author of *Strategic Leadership: Framework for a 21st Century National Security Strategy* (Center for a New American Security, 2008).

His most recent books are *The End of Arrogance: America in the Global Competition of Ideas*, co-authored with Steven Weber (Harvard University Press, 2010) and *American Foreign Policy: The Dynamics of Choice in the 21st Century*, 5th edition forthcoming in 2013 (W.W. Norton).

At the time of the conference he was serving on the Responsibility to Protect (R2P) Working Group, co-chaired by Madeleine Albright, and as co-PI for the Center for a New American Security (CNAS) project, 'Amidst the Revolutions: U.S. Strategy in a Changing Middle East'.

He has held research appointments at the United States Institute of Peace, the Brookings Institution, Oxford University and the International Institute for Strategic Studies (London), and as a Fulbright Senior Research Scholar in Spain. His PhD is from Cornell University.

DR ERIC LARSON

Eric V. Larson (M Phil and PhD, Policy Analysis, RAND Graduate School, 1995) is a Senior Policy Researcher at RAND, Santa Monica, California, USA, with over 30 years of government and research experience in national security, defence and foreign affairs, public opinion and media analysis, and technology policy. Prior to joining RAND, Dr Larson worked in the Executive Office of the President (1980–83), the National Security Council Staff (1983–87), and at the Institute for Defense Analyses (IDA, 1987–89).

Dr Larson's most recent publications include: *Understanding and Influencing Public Support for Insurgency and Terrorism* (RAND, forthcoming); *China and India, 2025: A Comparative Assessment* (RAND, 2011); 'Al Qaeda's Propaganda: A Shifting Battlefield', in *The Long Shadow of 9/11: America's Response to Terrorism* (RAND, 2011); *Foundations of Effective Influence Operations* (RAND, 2009); *Understanding Commanders' Information Needs for Influence Operations* (RAND, 2009); *Assessing Irregular Warfare: A Framework for Intelligence Assessment* (RAND, 2008); and *Misfortunes of War: Press and Public Reactions to Civilian Deaths in Wartime* (RAND, 2006).

Dr Larson serves on the faculty of the Frederick S. Pardee RAND Graduate School, and has served as a reviewer for *Public Opinion Quarterly*, *International Studies Quarterly*, *Political Behavior*, *Political Science Quarterly*, *Research Policy*, and Stanford University Press. He has in the past participated in studies by the United States Air Force Scientific Advisory Board, and the United States Army Science

Board, and briefed a wide range of policy, military, and academic audiences on his research.

Dr Larson's current research focuses on Afghan-Pakistani strategy, public support for insurgency and terrorism, al-Qaeda's salafi-jihadi ideology and strategy, irregular warfare, strategic communications, influence operations, applications of agent-based rational choice modelling to national security problems, and Chinese and Indian defence spending.

Dr Benjamin S. Lambeth

Benjamin S. Lambeth is a Senior Fellow at the Center for Strategic and Budgetary Assessments, a position he assumed in 2011 after a 37-year career at the RAND Corporation. He has written more than six dozen books and articles on air power and other defence-related matters.

Before joining RAND in 1974, he served in the Office of National Estimates at the Central Intelligence Agency. Prior to that, he worked for the Center for Strategic and International Studies and the Institute for Defense Analyses.

A civil-rated pilot, Dr Lambeth has flown or flown in more than 40 different fighter, bomber, attack, mobility, surveillance, and trainer aircraft types with the United States Air Force, Navy, and Marine Corps, as well as with the Royal Air Force, Royal Australian Air Force, German Luftwaffe, Royal Canadian Air Force, Royal Netherlands Air Force, Royal Norwegian Air Force, Republic of Korea Air Force, Finnish Air Force, and Israeli Air Force. He also has attended the USAF Tactical Fighter Weapons and Tactics Course and Combined Force Air Component Commander Course, the Aerospace Defense Command's Senior Officers' Course, and portions of Navy Fighter Weapons School (TOPGUN) and the Marine Aviation Weapons and Tactics Instructor's Course.

In December 1989, he became the first US citizen to fly the Soviet MiG-29 fighter and the first Westerner invited to fly a combat aircraft of any type inside Soviet airspace since the end of World War II.

Dr Lambeth earned his PhD in Political Science from Harvard University. He is a member of the Council on Foreign Relations, the Board of Visitors of Air University, and the Editorial Advisory Boards of *Air and Space Power Journal* and *Strategic Studies Quarterly*. He also is the author of *The Transformation of American Air Power* (Cornell University Press, 2000), which won the Air Force Association's Gill Robb Wilson Award for Arts and Letters in 2001.

In 2002, he was elected an Honorary Member of the Order of Daedalians, the national fraternity of US military pilots.

ASSOCIATE PROFESSOR CHRISTIAN ENEMARK

Christian Enemark is Associate Professor and Acting Deputy Director at the National Security College, Australian National University (ANU). Prior to completing his doctorate, he worked as a policy adviser in the Parliament and Attorney General's Department of New South Wales. Christian has held academic positions as Lecturer in Global Security at the University of New South Wales (Australian Defence Force Academy campus), and Senior Lecturer in International Security at the University of Sydney. His research and teaching interests include the security implications of infectious disease threats (including biological weapons), the ethics of armed conflict, and theories of security. Christian has held ANU Visiting Fellowships at the John Curtin School of Medical Research (2007–08) and the Centre for Applied Philosophy and Public Ethics (2009–11).

AIR VICE-MARSHAL MEL HUPFELD, DSC

Air Vice-Marshal Mel Hupfeld was born in Sydney in 1962. He joined the RAAF as a RAAF Academy Cadet in January 1980, winning the Flying Prize for his year and graduating with a Bachelor of Science degree in 1983.

Air Vice-Marshal Hupfeld's early career was spent in a variety of flying positions on Mirage and F/A-18 aircraft, primarily with No 3 Squadron and No 2 Operational Conversion Unit, before qualifying as a Fighter Combat Instructor in 1989. Following a period of service as B Flight Commander, 3 Squadron, Air Vice-Marshal Hupfeld was appointed as the Executive Officer of 2 Operational Conversion Unit in 1995.

In 1997 Air Vice-Marshal Hupfeld was selected to attend the UK Joint Services Advanced Command and Staff Course, graduating with a Master of Arts in Defence Studies from King's College in London, before taking up post as a Deputy Director in the Aerospace Development Branch.

In 2001 Air Vice-Marshal Hupfeld took command of No 75 Squadron and led the Squadron in operations in the Middle East on Operations *Bastille* and *Falconer*. In 2003 Air Vice-Marshal Hupfeld was awarded a Distinguished Service Cross (DSC) in recognition of his performance as Commanding Officer 75 Squadron on Operation *Falconer*, and his squadron was awarded a Meritorious Unit Citation.

On promotion to Group Captain in January 2004, he was appointed Director Aerospace Combat Development in the Australian Defence Headquarters, before accepting appointment as Officer Commanding No 81 Wing in January 2006. Promoted to Air Commodore in November 2007, he became the Director of the Combined Air Operations Centre in the Middle East Area of Operations, before returning to Australia as the Director General Air / Director General Air Command Operations in March 2008. In December 2009, he took command of Air Combat Group where he oversaw all of the RAAF's fast-jet combat aircraft to deliver Australia's capability to control the air and conduct precision strike.

Air Vice-Marshal Hupfeld was promoted and appointed to his current position as the Air Commander Australia on 3 February 2012. In this position he provides specialist air advice on raise, train and sustain issues to the joint environment.

Air Vice-Marshal Hupfeld is married to Louise, and his interests include cycling, running, fishing, light aircraft, hang-gliding and sailing.

Air Commodore Edward Stringer, CBE

Edward Stringer joined the Royal Air Force via its University Cadetship scheme and an engineering degree from Liverpool University. After officer and flying training, he was posted to the Jaguar Force where he became a Qualified Weapon Instructor and spent a tour at Boscombe Down in Operational Test and Evaluation.

He has completed many operational tours including the Gulf War of 1991, the 'No-Fly Zones' over Iraq and Bosnia between 1991 and 2003, and the recent counterinsurgency operations in Iraq and Afghanistan. Edward's command tours include: Officer Commanding No 54(F) Squadron, when he was also the Jaguar Force Commander for Operation *Telic* in Iraq; Station Commander RAF Leeming and, concurrently, Tornado F3 Force Commander; Commanding Officer 904 Expeditionary Air Wing based at Kandahar, Afghanistan in 2008; Commandant Air Warfare Centre, from 2009 to 2011, during which he was also the UK's first Air Component Commander for Operation *Unified Endeavour*, the NATO operation in Libya.

He has completed staff tours in the Air Warfare Centre, the Directorate of Operational Capability in the Ministry of Defence (MOD), and as Assistant Director (Operations) in the Air Staff, also within the MOD. His most recent appointment was as Head of Joint Capability in the Security Policy and Operations area of the MOD. His military education includes advanced staff college in Canada in 1999, the Higher Command and Staff Course in the UK in 2006, and the Royal College of Defence Studies in 2009. He completed a Master of Arts in International Relations at King's College London in 2010. He is currently on a Slessor Fellowship at Oxford University, researching political/military relations and strategy creation.

His awards include Member of the Order of the British Empire (MBE) in 2000, Officer of the Order of the British Empire (OBE) in 2003 and Commander of the British Empire (CBE) in 2009. Edward is married to Louise, a GP in Yorkshire, where the family of two children are at school.

Commander Jol Woodard

Jolyon Woodard was born in Truro, Cornwall, in 1969 and joined the Royal Navy in September 1991 as a short career aviator.

Jolyon's flying appointments began in July 1995 when he joined 845 Naval Air Squadron, part of the Commando Helicopter Force (CHF). He saw operational

service in the Former Republic of Yugoslavia during a number of detachments between 1995 and 1997. A tour on 846 Naval Air Squadron followed, with much time spent operating in Northern Ireland, before returning to 845 Naval Air Squadron as a Flight Commander. In this guise he saw further service in the Former Republic of Yugoslavia (1999–2000) and the tour culminated with provision of support to Afghanistan shaping operations from the Indian Ocean in 2001. Throughout these CHF tours he participated in numerous amphibious exercises, embarking in a variety of maritime platforms. After a number of years away from the cockpit, he was in 2007 appointed Senior Pilot and Executive Officer of 846 Naval Air Squadron and during that appointment was fortunate enough to have the opportunity to prepare and lead the first Operation *Herrick* Sea King detachment into Afghanistan.

Jolyon has held a number of non-flying appointments. His first was as the Royal Barge Officer in HMY *Britannia* in 1994, during which time he gained his Bridge Watch-keeping ticket. Various staff appointments have included a spell in the Joint Helicopter Command Headquarters and time as the Operations Officer in the Joint Helicopter Force Northern Ireland. In 2005 he returned to the CHF, this time as SO2 J3 Operations and during his tenure operated as part of the Amphibious Battlestaff in HMS *Bulwark* and *Albion*, and also served as Chief of Staff Joint Helicopter Force (Cyprus) during Operation *Highbrow*, a Non-combatant Evacuation Operation (NEO) from Lebanon in July 2006. After a stint as Military Assistant to Chief of Staff Aviation and Carriers (COS AVN) he attended Advanced Command and Staff College, prior to assuming command of 845 Naval Air Squadron in 2010. During this command and in his capacity as lead-squadron Commanding Officer for the CHF, he deployed on operations to Afghanistan. He also served as HMS *Ocean's* Tailored Air Group Commander during Operation *Ellamy* in the spring/summer of 2011. He took up his most recent appointment in the Ministry of Defence Operations Directorate in January 2012.

Major General Margaret Woodward

Major General Margaret H. Woodward is Commander, 17th Air Force and US Air Forces Africa, Ramstein Air Base, Germany.[1] The command serves as the Air Component for US Africa Command and has responsibility for all Air Force activities in the Africa theatre, spanning 53 countries, 11 million square miles and more than 900 million people.

General Woodward entered the Air Force in 1983 as a graduate of Arizona State University, earning a Bachelor of Science degree in aerospace engineering. Her

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1   Editor's Note. In September 2012, Major General Woodward was appointed as the Air Force Chief of Safety, Headquarters US Air Force, Washington, DC, and Commander Air Force Safety Center, Kirkland Air Force Base, NM.

career includes a variety of operational and staff positions, including command at the squadron, group and wing levels. She flew and commanded in Operations *Just Cause*, *Northern Watch*, *Southern Watch*, *Allied Force*, *Enduring Freedom* and *Iraqi Freedom*. The general served in the Office of the Secretary of Defense as the Director of Protocol and military assistant, and she was the Deputy Director for Colonel Matters, Air Force Senior Leader Management Office, Washington, DC. Prior to her current assignment, General Woodward was Vice Commander, 18th Air Force, at Scott Air Force Base, Illinois.

General Woodward is a command pilot with more than 3800 hours in C-40, KC-135, C-37, T-38 and T-37 aircraft.

Colonel Derek Joyce[2]

Colonel Joyce joined the Canadian Forces in 1985 after graduating from the University of Alberta with a Bachelor of Science in Economics.

He earned his air navigator (now air combat systems officer) wings in May 1987 and assumed the duties of a maritime patrol navigator on the CP-140 Aurora with 405 (Maritime Patrol) Squadron, his first of three tours with the 'Pathfinders'. He began his last tour with 405 Squadron as Commanding Officer in 2004 and subsequently deployed to Kabul, Afghanistan in August 2006, working in NATO Headquarters. From 2007 to 2009 Colonel Joyce was appointed Wing Commander, 14 Wing Greenwood. In April 2010, he assumed command of the Canadian Forces Aerospace Warfare Centre located at 8 Wing, Canadian Forces Base Trenton.

Colonel Joyce is a graduate of the United Kingdom Advanced Command and Staff Course and the National Studies Program in Toronto. He has worked in a number of different staff positions in Halifax, Ottawa and Winnipeg, mostly focusing on support to operations.

Colonel Joyce has over 3000 flying hours on the CC-130 Hercules and CP-140 Aurora. Promoted to Brigadier-General (AWSE)[3] in August 2011, he was appointed the Commanding Officer of Task Force Libeccio, the air component deployed on Operation *Mobile*, the Canadian Forces' participation in Operation *Unified Protector*, the NATO-led effort to impose on Libya the arms embargo and no-fly zone authorised in UN Security Council Resolution 1973 of 17 March 2011, which called on the international community to protect civilians and civilian-populated areas in Libya.

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2   Editor's Note. In June 2012, Colonel Joyce was promoted to Brigadier-General and assigned to the Privy Council Office in Ottawa as the Military Advisor to the National Security Advisor.

3   AWSE – Acting While So Employed.

MAJOR GENERAL MOHAMED BIN SWEIDAN SAEED AL QAMZI

Major General Mohamed bin Sweidan Saeed Al Qamzi was born in Dubai in 1954. He started his career with the military field early by joining the Dubai Defence Force and was recruited as a cadet in the UAE Air Force and Air Defence in 1971. He started as a pilot by attending a basic flying course in Italy during 1974–76, followed by a course on Falcon aircraft in France (1977) and a Ground Hawk Flying course in Britain (1983), as well as several specialised pilot courses on Hawk fighter aircraft.

In 1986 he attended the Advanced Command and Staff Course in Britain and the High Command and Staff Course in the following year. In 1994 joined the Accident Management Seminar Course in USA.

He was promoted to Brigadier General in 1998 and has had the following appointments:

- Commander at Al Minhad Air Base Dubai, 1998
- Adjutant Commander UAE Air Force and Air Defence, 1998
- Assistant Commander UAE Air Force and Air Defence, 1999
- Assistant Commander UAE Air Force and Air Defence / For Air Defence, 2001

In 2001 he joined International Defence Management, USA and on 30 December 2003 was promoted to Major General. In 2005 he was assigned as Deputy Commander UAE Air Force and Air Defence. His most recent appointment was on 5 February 2006 when he was assigned as Commander UAE Air Force and Air Defence.

LIEUTENANT GENERAL ANTOINE NOGUIER

Lieutenant General Antoine Noguier is Commander Air Defense and Air Operations Command,[4] located in Paris and Lyon, France. Air Defense and Air Operations Command is responsible for extended Air Defense and Air Policing over French territory and for command and control, planning and coordination of any operations using the French deployable JFACC, located in Lyon.

General Noguier entered active duty in 1979 and graduated from the French Air Force Academy, class 1980. He earned his fighter pilot wings in 1984. His aviation assignments include pilot, flight commander and deputy squadron commander. Operational assignments include Chad, Saudi Arabia (Operations *Desert Shield* and *Southern Watch*) and Turkey (Operations *Provide Comfort* and *Northern*

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4   In September 2012, Lieutenant General Noguier was appointed as chief of the Military Office for the French Minister of Defense.

Watch). The General has commanded 3/3 Fighter Squadron at Nancy and served in the Air Combat Command in Metz. He also served in the Strategic Affairs Department of the Ministry of Defence and at NATO Headquarters, Brussels, in IMS, as CMC special assistant and in Secretary General Private Office. His last assignment was as military adviser to the President of the French Republic.

General Noguier is a command pilot with more than 3000 flying hours in the Mirage 2000B/2000C/2000D, Mirage F1C and Alpha Jet.

COLONEL ROBERTO DI MARCO

Colonel Roberto Di Marco was born in Messina, Italy, on 20 August 1965. He attended the course 'Centauro 4' at the Air Force Academy from 1983 through 1987.

Colonel Di Marco has attended numerous professional courses including the following:

- Electronic Warfare Course, Germany
- Tactical Leadership Program, Florennes, Belgium
- Standard and Command Courses, Air War College, Italy
- F-16C, Block 25, Senior Officer Conversion Course, Arizona, USA
- NATO Senior Officer Crisis Management Course, Oberammergau NATO School, Germany
- Allied Command Europe Air Ground Defense Course, Germany
- Joint/Combined Staff Office Course, Joint Forces Staff College, USA

From 1998 to 2000, he commanded the 10th Fighter Interceptor Squadron, supporting NATO Operation *Allied Force* (1999), leading stabilisation forces in the Balkans (Kosovo).

From 23 March 2001 to 6 June 2001, Colonel Di Marco served as Operations Support Group Commander and Chief of Operations, 2nd Directorate of Autonomous Operations (DAO), Pristina, Kosovo. In 2001 he was assigned to the Italian Air Staff, where he served as Chief of the Air Tactics Training and Execution Branch. In July 2004, he became Head of the Project, specialising in all anti-terrorism (renegade) air defence matters. In January 2006, he was appointed Chief of the Exercises, Employment and Expeditionary Operations Branch of the Air Staff and then Deputy Chief of the Force Readiness and Employment Division.

From September 2007 to July 2009 he commanded the 5th Fighter Wing, Cervia, supporting the NATO Quick Reaction Alert (QRA) posture with F-16 air defence fighter.

Colonel Di Marco presently serves as the Air Staff Chief of Aerospace Force Generation/Operational Capabilities Division, where he participated in the plans, policy and coordination of Operation *Odyssey Dawn* through to the conclusion of Operation *Unified Protector*, considered the most successful operation in NATO history.

Colonel Di Marco is a pilot with over 2600 hours in nine different aircraft and more than 1900 hours in single-seat fast jet (mainly F-104 and F-16), carrying all qualifications including Operational Tactics Instructor and Chase.

He earned a degree in Aeronautical Science from the Italian Air Force Academy (Naples), and a degree in International and Diplomatic Sciences from the University of Trieste.

His decorations and awards include:

- Medal of Merit for Air Longevity – 25 years
- Golden Cross for Senior Service – 25 years
- NATO Medal for Former Yugoslavia operations
- NATO Medal for Kosovo operations
- National Medal for Peace Operations Overseas
- Badge for Participating in Armed Conflicts, specialising in air-to-air interception and combat
- Order of Merit of the Italian Republic (Presidential Decree of 06.02.2006);
- Badge of the Department of Civil Protection for planning the Big Event Funeral of John Paul II and Rescue of East Timor

Colonel Di Marco is a scholar of military history and diplomacy, and enjoys quality time with his family and service to his country.

Dr Sanu Kainikara

Dr Sanu Kainikara is the Air Power Strategist at the Air Power Development Centre and also a Visiting Fellow at the University of New South Wales. He is the author of eight books: *Papers on Air Power* (2007), *Pathways to Victory* (2007), *Red Air: Politics in Russian Air Power* (2007), *Australian Security in the Asian Century* (2008), *Seven Perennial Challenges to Air Forces*, (2009), *The Art of Air Power: Sun Tzu Revisited* (2009), *A Fresh Look at Air Power Doctrine* (2011), and *At the Critical Juncture: The Predicament of Small Air Forces* (2011). He has presented extensively in international forums and published numerous papers on national security, strategy and air power. He is the recipient of the RAAF Chief of Air Force's Commendation.

Dr Kainikara is a former fighter pilot of the Indian Air Force who retired as a Wing Commander after 21 years of commissioned service. During his Service career, he has flown over 4000 hours on a number of modern fighter aircraft and held various command and staff appointments. He is a Qualified Flying Instructor, a Fighter Combat Leader and a graduate of the National Defence Academy, the Defence Services Staff College, and the College of Air Warfare. He is a recipient of the IAF Chief of Air Staff Commendation and the Air Force Cross.

After retirement from active service, he worked for four years as the senior analyst, specialising in air power strategy, for a US Training Team in the Middle East. Prior to his current appointment he was the Deputy Director Wargaming and Doctrine in the Strategy Group of the Department of Defence. He has also taught Aerospace Engineering at the Royal Melbourne Institute of Technology University, Melbourne.

He has two Bachelor degrees, a Masters degree in Defence and Strategic Studies from the University of Madras and his PhD in International Politics was awarded by the University of Adelaide.

Abbreviations and Acronyms

ADF   Australian Defence Force
ADFA   Australian Defence Force Academy
ATO   Air Tasking Order
AWACS   Airborne Warning and Control System

C2   Command and Control
CAOC   Combined Air Operations Centre
CAP   Combat Air Patrol
CENTCOM   Central Command [US]

FAC   Forward Air Controller

GCC   Gulf Cooperation Council

IAEA   International Atomic Energy Agency
ICISS   International Commission on Intervention and State Sovereignty
IDF   Israel Defense Forces
ISR   Intelligence, Surveillance and Reconnaissance
ISTAR   Intelligence, Surveillance, Target Acquisition, and Reconnaissance

JDAM   Joint Direct Attack Munition
JSF   Joint Strike Fighter
JSTARS   Joint Surveillance Target Attack Radar System

LGB   Laser-Guided Bomb

MEAO   Middle East Area of Operations

NATO   North Atlantic Treaty Organization

R2P   Responsibility to Protect
RAAF   Royal Australian Air Force
RAF   Royal Air Force
RCAF   Royal Canadian Air Force
RFTG   Response Force Task Group
ROE   Rules of Engagement

SAM   Surface-to-Air Missile
SEAD   Suppression of Enemy Air Defences
SCAF   Supreme Council of Armed Forces [Egypt]

SCAR   Strike Coordination and Reconnaissance

TAG   Tailored Air Group
TLAM   Tomahawk Land Attack Missile

UAE   United Arab Emirates
UAE AF&AD   United Arab Emirates Air Force and Air Defence
UN   United Nations
UNSC   United Nations Security Council
UNSCR   United Nations Security Council Resolution
US   United States
USAF   United States Air Force

WMD   Weapons of Mass Destruction

Opening Address

Air Vice-Marshal Leo Davies

Service Chiefs and their representatives, VIPs, our guest speakers and distinguished guests, ladies and gentlemen welcome to the 2012 Royal Australian Air Force Air Power Conference. Firstly, I would like to acknowledge the number of sponsors who have made this conference possible, not just this year but for a number of years, and our principal sponsor this year again is Boeing. They have not only generously supported the conference over the last three years, but continue to be a major part of what Air Force does here in Australia in generating Australian air power. We are also very strongly supported by our major sponsors, Rolls-Royce and L-3, both of whom are steadfast partners in a number of capability systems that we operate. And I would also like to thank DefenceHealth for their ongoing support of our men and women who are in the combat zone and supporting here, but especially for supporting our families.

The first Chief of Air Force (CAF) Air Power Conference was held here in Canberra in 1991 and the topic then was 'Smaller but Larger: Conventional Air Power into the 21st Century'. That conference explored a number of things of importance and concern at that time. As the then Chief, Air Marshal Ray Funnell—who is here today—noted, the conference was not only a means of celebrating the RAAF's 70th birthday, but it was a response to the obligation of professional airmen to question, to examine and to restate our fundamental beliefs. At a time when air power, particularly here in Australia, was seen as frequently undervalued and frequently misunderstood, the conference explored the utility of air power in evolving international security environments. Today the utility of air power, although perhaps more evident, is still open to some persistent undervaluation and possibly some misunderstanding. The need for conferences like this then to question, examine and restate our fundamental beliefs is as relevant and necessary today as it was over two decades ago. The RAAF's Air Power Conferences have grown since 1991 into regionally and internationally respected forums that have engaged a number of important and relevant air power themes. Our conferences have attracted and continued to attract a diverse audience from a broad set of backgrounds. In attendance this year are Service Chiefs and their senior representatives from Brunei, Canada, China, France, India, Indonesia, Italy, Japan, Malaysia, New Caledonia, New Zealand, Pakistan, the Philippines, Saudi Arabia, Thailand, Turkey, United Arab Emirates, United Kingdom and the United States of America. We are proud to have attracted such a strong international guest list, one which represents the region, our partners, our allies and our friends. We also welcome here today senior Defence officials, many of them policymakers, strategists, academics, and scholars from local and international organisations,

from institutions and from governments. Welcome too are members of the militaries of Services from our region and around the world, and uniformed and civilian members of our own Services, and members of the public, commentators and our very good friends from the media. Ladies and gentlemen we have over 650 attendees at the conference this year.

There are a number of reasons that the Air Force chooses to host these conferences and to date the value gained from them has continued to represent very sound investment. The primary justification for these conferences is that they represent invaluable opportunities in terms of engagement, cooperation, education and the impetus to further air power development. Many of the themes, presentations and, indeed, the questions that we expect from this conference result in expanded engagement and stronger relationships.

Our conference this year has adopted a theme that we are sure will be as informative and interesting as it is contemporary and important. It is a theme chosen by Air Marshal Brown in response to an immense interest generated, certainly within our Air Force, following the events of last year. Our focus, as described in our conference material, is 'Air Power and Coercive Diplomacy' and our speakers are asked to examine the use of air power over Libya in 2011. The intent of the program is primarily twofold:

- first, to provide a perspective on the contemporary international security environment through an analysis of the events in the Middle East associated with the 'Arab Spring'; and

- second, to investigate the use of air power in Libya with the general coercive strategy employed by NATO.

We are extremely fortunate this year to have a number of leading experts in their relevant fields to address a series of issues around that air power focus. In addition, we are very grateful to the senior military officers who have made themselves available to present national perspectives on the operations undertaken as part of Operation *Unified Protector*. I think you will find the program will indeed challenge some of our generally held views and some of our prejudices regarding the use of air power as a coercive instrument. I also suggest that in examining the conflict in Libya, we might have reason to contemplate a little more deeply the nature and state of the contemporary security environment in which we now operate.

Ladies and gentlemen, welcome to Canberra our nation's capital and without any further preamble and to commence our 2012 Air Power Conference I would like to invite our first speaker, the Honourable Steven Smith, Minister for Defence, to deliver the keynote address.

Keynote Address

Senator the Hon. Stephen Smith, MP

Introduction

I acknowledge the Chief of Air Force, Air Marshal Geoff Brown, and the Vice Chief of the Defence Force, Air Marshal Mark Binskin. I welcome our international guests and acknowledge the visiting Chiefs of Air Forces and distinguished guests, ladies and gentlemen. I am pleased to see representatives of all three Services and the Defence organisation generally.

The aim of the Air Power Conference is to encourage strategic thinking and informed debate about the role of air power and modern air forces. Such conferences play an important role in examining the contribution of defence and the military in modern society.

Your conference theme, 'Air Power and Coercive Diplomacy', includes an examination of the use of air power during operations in Libya in 2011. Libya is an example of the air power capability and preparedness challenge that nations face across the globe today. This is a timely examination of these events.

Modern Air Force

The Royal Australian Air Force is one of the most capable, responsive and flexible in our region, if not the world. It is undergoing a period of significant transition, with the Government committed to continuing to build its capability. This commitment endures in the context of what is a difficult but nevertheless manageable fiscal environment for Defence and the Air Force.

The 2012–13 Defence Budget

The Government's priority was to return the Budget to surplus in 2012–13, which has been achieved. This is part of a strategy to ensure the strength of our economy, a strategy which is essential for the future economic security of Australians. A strong economy is good for all Australians and it is good for Defence. All Commonwealth departments and agencies were called upon to contribute to the all-important objective of a surplus.

The Defence Budget released on Tuesday was developed following a comprehensive review of the department's budget to identify contributions Defence could make across the forward estimates to support the Government's broader fiscal strategy. This review has resulted in a Defence contribution to the Government's fiscal strategy of $5.4 billion across the four years of the forward estimates and will see

Defence contribute $971 million in 2012–13. Importantly, we have ring-fenced key priorities from these savings:

- There will be no adverse impact on operations in Afghanistan, East Timor or the Solomon Islands.

- There will be no reduction of the number of military personnel in the Army, Navy and Air Force.

- There will be no adverse implications for equipment for forces about to be deployed or on deployment.

- There will be no reductions in conditions or entitlements for Service personnel, other than those already being considered as part of the Strategic Reform Program.

- There will be minimum impact on the delivery of core Defence capabilities.

And there is no fundamental change to our Defence Budget from a strategic perspective:

- In the 2009–10 Budget, the Government, for the first time, budgeted over $100 billion for Defence across the forward estimates.

- Last year in the 2011–12 Portfolio Additional Estimates Statements, Defence's Budget across the then four-year forward estimates period was $103.4 billion.

- In this Budget, the Government has budgeted $103.3 billion for Defence across the forward estimates period.

- This level of funding will maintain Australia's status in the top 15 nations in terms of world defence expenditure; alongside Canada, we are either 13th or 14th in that list.

- Australia continues to be second on the list of military expenditure on a per capita basis, with only the United States spending more per capita.

- In real dollar terms, we spend far greater than any of our regional neighbours.

The Government remains committed to the core capabilities outlined in the 2009 Defence White Paper, including:

- the Joint Strike Fighter (JSF);

- the replacement for the Caribou aircraft;

- upgrades to Orion maritime patrol aircraft;

- upgrades to C-130J aircraft; and

- consideration of the Growler airborne electronic attack (AEA) capability.

Of the 180 DCP (Defence Capability Plan) projects underpinning the 2009 White Paper, 170 remain, with only 10 removed, and those being overtaken by related projects or replaced by newer technologies. A range of lower-priority capability projects will be deferred. Other major and minor capability and facility programs will be subject to re-scoping.

Defence operations will continue to be fully supported, with the Budget providing an additional $1.4 billion in 2012–13 and across the forward estimates. This includes:

- an additional $1.3 billion for operations in Afghanistan and the Middle East;

- an additional $77 million for the ADF's contribution to maintenance of peace and stability in East Timor as part of Operation *Astute*; and

- an additional $44 million for Defence's role in Operation *Anode*, the Australian-led Regional Assistance Mission to Solomon Islands (RAMSI).

The key measures include:

- a two year delay to the acquisition of 12 Joint Strike Fighters following delays to the project in the United States, saving $900 million and deferring later stages of the Joint Strike Fighter project for a total saving of $1.6 billion; and

- savings of $250 million from the early retirement of the C-130H aircraft.

The Government has also prioritised maintenance and sustainment activities, almost all of which is conducted in Australia.

In 2012–13, the Budget for sustainment is $4.6 billion per annum. This will grow to $4.8 billion per annum by 2015–16. This includes prioritisation of an additional $700 million for Collins Class submarine sustainment, noting the longstanding challenges this fleet has faced, a further $270 million for Navy fleet sustainment and a total of $6.1 billion for Air Force sustainment across the forward estimates.

2013 Defence White Paper

The Prime Minister and I last week announced the commissioning of a new Defence White Paper to be delivered in the first half of 2013 that will consider the implications of Australia's changing strategic and fiscal environment.

These changes include:

- The Australian Defence Force's post-operational challenges, including transition in Afghanistan and drawdown in East Timor and Solomon Islands.

- The Australian Defence Force Posture Review which addressed a range of national security factors.

- The ongoing effects of the global financial crisis, which since the 2009 Defence White Paper has continued to unfold with unexpected severity and duration.

Defence Capability

The 2012–13 Budget contains over $3.4 billion in investment in Defence capabilities in 2012–13, and over $17.5 billion over the forward estimates.

The focus of this Budget's capability activities will be on improving airlift, land mobility, submarines, afloat support, communications, interoperability, and electronic and cyber warfare. The total value of projects planned to be considered by Government for approval in the 2012–13 amounts to approximately $9 billion. This is on top of the $6 billion in projects approved in 2011.

Combined, the Government has approved over $13.4 billion for key capability projects since the 2009 White Paper, including:

- the first 14 Joint Strike Fighters,

- 24 new naval combat helicopters,

- seven new CH-47F Chinook helicopters, and

- two more D model Chinooks.

We have also allocated funding for essential new capabilities not envisaged in the 2009 Defence White Paper, including two additional C-17 heavy lift aircraft. These new capabilities will complement an already capable Air Force that includes 24 F/A-18 Super Hornets and 71 'classic' F/A-18 Hornets, 12 C-130J model Hercules and 19 P-3 Orion maritime patrol aircraft.

Airlift

Airlift is a critical element of the Australian Defence Force's capability to deploy, whether it is to Afghanistan or in support of humanitarian and disaster relief operations closer to home.

In Afghanistan, C-17 and C-130J aircraft provide the transport backbone for the Australian Defence Force's operations.

Three C-130J aircraft, based in the United Arab Emirates, provide in-theatre air movement for Australian and International Security Assistance Force (ISAF) forces throughout the Middle East Area of Operations (MEAO), including Afghanistan.

C-17 aircraft from the RAAF's Amberley-based 36 Squadron provide routine strategic lift support to Australian forces in the MEAO, including Afghanistan.

In 2011, the Australian Defence Force's airlift capability also effectively responded to a range of natural disasters in Australia, including floods in Queensland and Victoria. Air Force C-17s also supported relief efforts in New Zealand following the February earthquake in Christchurch and in Japan following the March 2011 earthquake and tsunami disaster.

The C-17s are particularly suited to heavy lift operations such as this. The C-17 can lift very large and heavy cargoes over long distances providing a significant contribution to Australia's ability to reach and respond to events. One C-17A can carry up to four C-130 Hercules loads in a single lift and cover twice the distance in three-quarters of the time of a C-130.

The effectiveness of the C-17 on these operations underpins the Government's decision to acquire an additional two aircraft for a total fleet of six. The acquisition of the fifth C-17A was announced by the Government in March 2011 at a cost of around $260 million. The fifth C-17 arrived in Australia in September 2011.

In March 2012 the Government announced that Australia would purchase a sixth C-17A. The aircraft has been purchased through the United States Foreign Military Sales program, at a total acquisition cost of around $280 million. Initial Foreign Military Sales payments have been made, and the C-17 is on schedule to be delivered to Defence in the United States in October this year. It will arrive in Australia before the end of the year.

The purchase of the sixth C-17A will double the number of C-17A aircraft available for operations at any one time from two to four. A sixth C-17 will give the Government increased options to support a wider range of contingencies that might require heavy lift aircraft and will extend the life of the C-17 fleet by reducing the use of each aircraft.

C-130H retirement

I am aware of suggestions that jobs will be lost in Richmond in the coming weeks because Defence is retiring its C-130H fleet. This is not the case.

Defence currently has 12 C-130H aircraft, introduced in 1978, which are based at RAAF Base Richmond, near Sydney. As part of the Defence contribution to the Government's return to surplus in 2012–13, the C-130H will be retired early in order to minimise costs associated with maintaining and operating the ageing fleet.

Current activities undertaken by the C-130H aircraft fleet will be redistributed across the remaining Air Force air mobility fleet, including C-130J aircraft and C-17 aircraft.

The aircraft are maintained by Qantas Defence Services. Defence has a contract with Qantas to maintain the C-130H fleet until 30 June 2013.

The Chief of Air Force advises the need to continue flying C-130H aircraft until at least the end of 2012. The process of retiring the fleet will take some time. This includes developing a disposal plan and a plan to redistribute the C-130H fleet's tasks.

The disposal process will require additional maintenance activities. Defence is in discussions with Qantas about these matters.

Air Combat Capability

Joint Strike Fighter

The Defence White Paper 2009 outlined the Government's commitment to acquire Joint Strike Fighters. In 2009, the Government announced approval for the purchase of the first 14 Joint Strike Fighters at a cost of around $3.2 billion. Of these, we are contractually committed to two, which will be delivered in the course of 2014 to 2015 in the United States for testing and training purposes.

In February, President Barack Obama sent to Congress a proposed Defense Budget for the US fiscal year 2013. The President's budget includes a restructuring of the Joint Strike Fighter program, involving the deferral of the acquisition of 179 aircraft and US$15 billion less in funding over the next five years.

While the US remains committed to the Joint Strike Fighter program, procurement has been slowed to complete more testing and make developmental changes before the purchase of aircraft in significant quantities. As United States Secretary of Defense Panetta has stated: 'We want to make sure before we go into production that we are ready'.

US Deputy Secretary of Defense, Ash Carter, has stated that the US will increase 'to full-rate production as and when it is economically and managerially prudent to do so'. I share that view.

In the 2012–13 Budget, the Australian Government has deferred by two years any further purchase of the Joint Strike Fighters beyond the two already contractually committed to. That effectively mirrors the decision which Secretary of Defense Panetta has taken.

The Budget effect of that is that it takes out of the forward estimates for this year's Budget about $1.6 billion, a significant contribution to the Government's priority of returning the Government to surplus. It is a reflection on the reality of delays in the Joint Strike Fighter program.

In the meantime, I will not allow, and the Government will not allow, a gap in our air combat capability. Australia's air combat capability is a vital part of our national security framework. An assessment of Joint Strike Fighter progress and any potential capability gaps will be presented to Government in 2012, and will inform further decisions on the project later in 2012.

Government will also consider whether any alternative options need to be implemented to supplement and ensure our air combat capability in the light of Joint Strike Fighter delays. An obvious option is the Super Hornet.

However, other alternatives will be examined before any decision is taken. This includes considering the life of our existing 71 'classic' F/A-18 Hornets. This would be similar to announcements by the US Air Force Chief of Staff, General Norton Schwartz, that the US will be extending the life of about 350 F-16 fighters.

Super Hornets

In October last year, the final four Super Hornets arrived at RAAF Base Amberley to bring the total to 24 aircraft. These 24 aircraft have been progressively delivered since the first tranche of Super Hornets arrived in March 2010.

The purchase of the Super Hornets will ensure Australia's regional air combat capability until the arrival of the Joint Strike Fighter. The Super Hornet gives the Royal Australian Air Force the capability to conduct air-to-air combat, strike targets on land and at sea, suppress enemy air defences and conduct reconnaissance.

It is an operationally proven aircraft having been flown by the United States Navy since 2001. The United States Navy have operated Super Hornets in Afghanistan, Iraq and Libya.

Australia is the first country outside the United States to fly the Super Hornet. The Super Hornet is what the White Paper 2009 referred to as a 'bridging' air combat capability until the arrival of the Joint Strike Fighter.

Growler

Another vital air power capability being progressed is Growler.

A key outcome from operations in Libya in 2011 was the effectiveness of the Growler electronic warfare aircraft.

Growler is an electronic warfare enhancement system that gives the Super Hornet the ability to jam the electronics systems of aircraft and land-based radars and communications systems. The Growler electronic warfare aircraft was used very effectively by the United States Navy during air operations in Libya last year.

The 2009 Defence White Paper outlined the Government's decision to wire 12 of our Super Hornets to enable them to be equipped at a later stage with the full Growler capability.

In March, the Minister for Defence Materiel Jason Clare and I announced that the Government had approved more than $19 million for the purchase of long-lead item electronic equipment for the potential conversion of 12 of Australia's F/A-18 Super Hornet's to the EA-18G Growler variant. This purchase ensures Australia will continue to have access to specific technologies needed to make any such conversion.

A final decision on whether Australia converts some of its Super Hornets to Growler configuration will be made after exhaustive assessment by the Government this year. If Australia converts some of its Super Hornets to Growler configuration it will be the only country in the world, other than the United States, operating such aircraft. This decision was made in part because of the important lessons learnt during air operations in Libya last year.

Maritime Patrol
Another important element of Australia's air power is maritime patrol.

Australia has over 36 000 kilometres of coastline and an offshore maritime area of 15 million square kilometres. An effective maritime surveillance capability is an essential element of Australia's ability to manage our maritime approaches.

The Royal Australian Air Force AP-3C Orion fleet aircraft currently undertake surveillance, reconnaissance and response roles, strengthening Australia's border protection operations against people smuggling, illegal fishing and piracy. We must also be able to provide intelligence, surveillance and reconnaissance support to operations further afield.

Two AP-3C Orion surveillance aircraft currently provide maritime surveillance in support of international counter-piracy, counterterrorism and maritime security operations in the Gulf of Aden, Arabian Sea and Indian Ocean, and overland surveillance in support of operations in Afghanistan. However, the fleet is expected to reach its planned withdrawal date around the end of the decade.

In December, the Government provided intermediate pass approval for Phase 2B of the Maritime Patrol Aircraft Replacement Project. This project will acquire a military-off-the-shelf maritime patrol aircraft to replace the current AP-3C Orion fleet, most likely the P-8 Poseidon aircraft, a developmental program. The Government has approved additional funding of almost $100 million for activities that will be conducted up to second pass.

The Government is also planning to acquire a long-range unmanned maritime surveillance aircraft to enter service after they are fully developed. We are closely monitoring the US program to develop a specialised unmanned maritime surveillance aircraft (the Broad Area Maritime Surveillance project), which is also developmental and not expected to be fully operational until 2019.

Navy and Army Air Power
Air power is not just about having a sophisticated, capable and flexible Air Force—it requires a joint effort. The Government is enhancing the capabilities of the Royal Australian Navy and the Australian Army.

Navy
In June 2011, the Government announced that it had approved the acquisition of 24 MH-60R Seahawk 'Romeo' naval combat helicopters at a cost of over $3 billion.

The acquisition of 24 'Romeos' means that Navy will be able to provide at least eight helicopters embarked at any one time in our Anzac class frigates and the new Hobart class air warfare destroyers.

The 'Romeos' are equipped with a highly sophisticated avionics suite designed to employ the Hellfire air-to-surface missile and the Mark 54 anti-submarine torpedo.

Australia's first two 'Romeos' will be accepted in mid-2014 for training and transition, with operations at sea expected to commence by mid-2015. The final aircraft will be delivered in 2018.

Army

In March of this year, I announced that a second Shadow 200 Tactical Unmanned Aerial System (TUAS) was delivered for use by Australian troops preparing to deploy to Afghanistan, almost one year ahead of schedule.

The Shadow 200 system captures full motion video during both day and night operations, which can be sent back to a ground control station up to 125 kilometres away. It can recognise targets on the ground while operating at an altitude of up to 8000 feet. The US Army and Marines first used the system in Iraq and have been using it operationally in Afghanistan. The Shadow 200 system was recently certified as fully operational. It has already completed more than 220 hours of successful testing and training.

We are also acquiring new D and F model Chinook helicopters, armed reconnaissance helicopters and MRH-90 helicopters.

C-27J Acquisition

Since the retirement of the Caribou fleet in 2009, after a career spanning more than four decades, Australia has had a military capability gap for tactical fixed wing airlift. This capability gap is being partially filled by C-130 Hercules aircraft and helicopters.

Today, I am pleased to announce that the Government has agreed to further strengthen Australia Defence Force's airlift capability with the purchase of 10 C-27J Spartan battlefield airlift aircraft at a cost of approximately $1.4 billion. The C-27J complements the capabilities of the C-130 and C-17 aircraft, and uses common infrastructure and aircraft systems, such as engines, avionics and the cargo handling systems.

The acquisition of the C-27J will significantly improve the ADF's ability to move troops, equipment and supplies. The C-27J has the capacity to carry significant load and still access small, soft, narrow runways that are too short for the C-130J or runways which are unable to sustain repeated use of larger aircraft.

In Australia, the C-27J can access over 1900 airfields compared to around 500 for the C-130 Hercules aircraft. In our region, the C-27J will be able to access over 400 airfields compared to around 200 for the C-130 Hercules aircraft.

These aircraft will provide battlefield airlift but are also capable of conducting airlift in our region. They will be able to operate from rudimentary airstrips in Australia and overseas and will be able to support humanitarian missions in remote locations.

The flexibility of the C-27J allows it to undertake a wide range of missions from delivering ammunition to front-line troops to undertaking aeromedical evacuation of causalities.

A battlefield airlifter needs to be able to operate in a high-threat environment. The C-27J with its missile warning systems, electronic self-protection, secure communications and battlefield armour provides protection from threats ranging from small arms to highly lethal man-portable air defence systems (MANPADS).

The C-27J was assessed by Defence as the aircraft which best met all the essential capability requirements and provides the best value for money. It was assessed as being able to fly further, faster and higher while carrying more cargo and requiring a smaller runway than the other aircraft under consideration, the Airbus Military C-295.

The acquisition of the 10 C-27J aircraft with associated support equipment will be conducted through a Foreign Military Sales (FMS) arrangement with the United States at a cost of around $1.4 billion.

The first aircraft are expected to be delivered in 2015 with the Initial Operational Capability scheduled for the end of 2016.

Initial logistic support, including training for aircrew and maintenance personnel, will be provided through the FMS program, utilising the system that has been established in the US. Defence will seek a separate agreement with the C-27J manufacturer, Alenia, in order to ensure that RAAF can operate, maintain and modify the aircraft throughout its planned life.

The 10 C-27J will be based in Richmond.

Closing Remarks

Air power is fundamental to Australia's defence strategy and to the principal task of the Australian Defence Force, to deter and defeat armed attacks on Australia.

The purchase of the C-27J demonstrates the Government's commitment to providing Australia's air power needs, a critical element of our national security capability, even in times of fiscal difficulty.

I wish you a productive conference.

Chief of Air Force Address

Air Marshal Geoff Brown

Distinguished guests, ladies and gentlemen, on behalf of the Royal Australian Air Force I would like to welcome everybody to the 2012 Air Power Conference. It gives me great pleasure that we have so many visitors from overseas, both Chiefs and senior officers, and I thank the many speakers who have travelled great distances. I am also very pleased to welcome the many retired members here as well as a lot of the current Air Force team, both permanent and Reserve, and our public service colleagues and contractors. Thanks very much for your attendance and contribution towards making this event a success.

Before I start, I should really thank the Minister for his announcement today on the ten C-27s. For our overseas visitors, I am not sure that many of you will realise how much of a struggle it has been for the Air Force to actually replace the Caribou. In fact, for our retired members I think it goes back to before I joined the Royal Australian Air Force. It has certainly been one of my focuses, and of former Chiefs, over the last five or six years.

Theme of Conference

The theme of the conference is 'Air Power and Coercive Diplomacy', and of course we will focus on the air operations undertaken by NATO forces over Libya in 2011. Now Canberra might seem like a rather curious venue for a discussion on the use of air power and coercive diplomacy—curious because the events in the Middle East are a long way from Australia, some 16 000 kilometres or, for the airmen amongst us, 8600 nautical miles. It is also probably curious from the Australian Defence Force's point of view because, other than a few airmen who were on exchange with the UK and US forces, we took no part and yet we are often an expeditionary force. And it is perhaps even more curious if we were to try to establish a clear link between the aspirations of a group of Libyan rebels and Australian national security priorities. But the links and connections are there and they actually go back as far as the formation of the Royal Australian Air Force, back when we were the Australian Flying Corps in the Libyan deserts at the start of the last century.

In June of 1916, aircrews of No 1 Squadron were involved in keeping watch for the activities of pro-Ottoman Arab Senussi tribesmen as they were pressing across the western desert in Libya. Of course, during World War II, between 1941 and 1944, a number of RAAF squadrons, including Nos 3 and 450, took part in the battles for air supremacy over the skies of the eastern half of Libya. A number of RAAF airmen became household names—men such as Peter Jeffrey, Nicky Barr, Bobbie

Gibbes and Clive Caldwell, who was the top-scoring Australian fighter ace of the entire war. All these airmen came to prominence during the fierce aerial contests that took place in the desert in Libya. So all our operations in the Mediterranean may not be all that recent but, as our past experiences have taught us, there are many valuable lessons to be drawn on from the experiences of our friends and allies.

I think one of the unifying beliefs that we all have and we share with our friends is the importance of stability, peace and order in securing our national interest. I would say that air power actually plays a prominent role in the maintenance of these interests. But the face of modern air power is changing and it is becoming more complex and we always need to question our understanding of that air power in the light of contemporary operations. My hope is that this conference will provide us with the opportunity to examine those underlying principles against the realities of recent operations.

So the intent of the program is twofold:

- Firstly, it will provide a considered perspective on the contemporary international security environment. On day one we will do this through an examination of the 2011 events in the Middle East in what is called the 'Arab Spring'.

- Secondly, on day two we will investigate the use of air power in Libya within the context of a coercive strategy that was generally employed by NATO.

On both days, the discussion will be directed to lead logically from a consideration of the global security environment to the operational implications of using air power today. I think by examining the settings and concepts against actual experiences we can learn a lot about the relationship between theory and practice. Importantly, we can consider the complex elements needed to allow ideas to be turned into operations.

Why is it Important to Air Force and Australia?

All states identify interests they need to pursue outside their own borders in order to protect their people, expand their economies and shape the world in which they want to live. Australia and Australians have been deeply engaged in the international community since European settlement. As a small population occupying a large resource-rich and remote continent, our focus as a nation has typically been outwards. Australian Governments have long recognised that our national security and prosperity are profoundly affected not only by domestic and regional issues, but also by international events across the globe. As our country has matured, so too have our perceptions of national interests and national security. We have evolved beyond the need to just protect our physical security

and the need to protect our resources. As a nation, we advocate the rule of international law, the right to life and a range of precepts that have shaped and conditioned a stable world order.

Australia has a long history of active diplomacy and aid engagement in the Asia-Pacific and a strong commitment to multilateral trade reform. Our commitment to the region and beyond reflects our enduring geopolitical realities. Maintaining Australia's national security is a fundamental responsibility of government and much of our diplomacy is directed towards this end. That diplomacy has been backed by a credible and capable Defence Force, and air power has long been a core element of our security strategy. As a flexible and responsive capability, Australian air power has proven effective across a spectrum of operations, contingencies and crises. Air power allows you to tailor the force response, a response that is appropriate and achieves the required outcome with the means available. It is readily scalable and can be employed across a number of air power strategies.

The NATO use of force in Libya in 2011 is the latest use of a tailored air power option. In this conference we intend to thoroughly examine this proposition and to gain a greater understanding of the air power options available to us today, especially in the West where air power plays such a pivotal role in our national defence structures.

Scope of Conference

It is important that we consider the context of our discussions to appreciate why air power would appeal to governments considering a strategy based on coercive diplomacy. We have already heard Chris Clark, our RAAF Historian, who gave us some insight into the origins of coercive diplomacy in some of its earlier forms. After morning tea, the distinguished Professor Amin Saikal will provide us an insight into the events of the Arab Spring that ignited a wave of change that swept across the Middle East. His colleague, Professor Ramesh Thakur, will bring into focus the objectives behind last year's military operations in Libya. Professor Thakur was instrumental in the development of the responsibility to protect (R2P) principle adopted by the United Nations and mentioned by our Minister for Defence earlier today. It is actually held up as the justification for the intervention in Libya. We certainly look forward to his perspective.

Our speakers this afternoon will step through the concepts which underpinned the use of force and diplomacy in Libya. Firstly, Professor Jentleson, a world leader in his field, will explore the concept of coercive diplomacy in the modern world. How we conceive it? Is it a bridge between policy and strategy? Is it an appropriate mix of force and diplomacy? Following this, our good friend Dr Ben Lambeth, will discuss the many faces of air power since the end of the Cold War. He will consider how and when air power has been effective as an instrument of coercion. After that we have got Doctor Eric Larson from RAND and he will take the discussion

a step further by looking at the theoretical and practical considerations of using air power as an instrument of coercion. Finally, Dr Christian Enemark will take a different approach and look at the ethical considerations of using air power as a coercive strategy.

Tomorrow, for the operators amongst us, we will look at the Libyan campaign in greater detail. It is true that perception is everything, so I am really grateful to have a broad range of speakers here today from the US, the UK, Canada, the United Arab Emirates, France and Italy to provide reflections on their particular experiences of the Libyan campaign. Finally, Dr Sanu Kainikara will provide our Air Force's perspective on the coercive use of air power.

So you might ask why a conference on air power is discussing the spectrum of diplomacy. I think most of us believe that the path from diplomacy to war is a continuum of sorts. Sometimes it is not an especially obvious or clear path but, as Clausewitz would remind us, the relationship between policy and war is a close and enduring one. The events over Libya last year offer us a very useful case study in the relationship between force and diplomacy.

There is no doubt, for example, that airlift during a humanitarian crisis or in response to a natural disaster is a useful addition to diplomatic engagement. On the other hand, the use of air-delivered munitions clearly helped convince President Milosevic to negotiate in Kosovo and it is a clear example of air power being used to coerce and to persuade. In these examples, air power can bridge the gap between diplomacy and force and I would say to you that it can actually have a lot more utility beyond its simple kinetic effect, understanding that utility, as it was demonstrated in Libya, is the true objective of this conference.

What is the Role for Air Power

Air power is a flexible and useful form of force. Now in the Australian context, air, land and maritime forces are really only considered as part of an integrated joint package. However, it is clear that the nature of military force used is often constrained by diplomatic, political, economic or other critical factors. Surely, this was the case in Libya.

It is clear that, regardless of our strategic circumstances and priorities, conflicts arise that demand military responses. But perhaps less clear is the fact is that the nature and character of the force options are often substantially determined by non-operational factors. A reflection on the limited conflicts of the past 20 years would highlight the fact that often the only force options seriously considered have been air power ones. This was the case in Bosnia in 1995, in Kosovo in 1999 and, perhaps, in Libya in 2011.

In some respects air power is a victim of its own success. It provides agile and responsive force options when the use of ground forces is explicitly 'off the table',

and sometimes it has been referred to as the 'weapon of first choice'. Of course, that is a pretty contested notion and in lots of ways it has led to an overstatement of air power's ability to shape and influence, and probably misrepresents the limits of air power. There are times and circumstances when air power is seen as the only viable and acceptable military option open to governments. It has proven very successful, within certain bounds, and has certainly been effective at delivering lethal force. It is often perceived as a low-risk, low-casualty option when incurring significant battlefield casualties is a daunting possibility for any government, especially when the nation state is not directly threatened. Of course, there are lots of alternative points of view and I am sure there are many in this room who would question how we measure decisiveness or how we measure air power's ability and capacity to coerce. How do we know our air power actions produce the kind of coercive effects we intend? When we use precise and proportionate air power effects, how do we measure the real coercive impact? It is a quandary that I think actually echoes the classic work of Professor Robert Jervis, *Perception and Misperception in International Politics*. It is probably not a puzzle that we will actually solve over the next few days, but I think that by looking at the use of air power in Libya we will certainly inform our thinking on the matter.

Now, as practitioners of modern air power, we owe a duty and a responsibility to our governments to offer the very best and most intelligent advice. In order to do this we need to understand air power, all its powerful effects, certainly its limitations, and its use as both hard and soft power. It is my hope that conferences like this will further our ability to do that.

Air Diplomacy

Before we launch into what happens when persuasion fails, I want to talk a little bit about soft power utility. Air diplomacy is not a term that is commonly used when we think of the Air Force, but it is actually a role that we have played for much of our history. Air diplomacy is a concept broadly understood to encompass the use of air power for diplomatic purposes. Now, for many people in the audience, myself included, when we hear the word diplomacy, we automatically picture embassies, foreign affairs officers and the occasional cocktail party. But, in essence, diplomacy is much more and has many faces. Dr Adam Lowther of the US Air Force Research Institute suggests that there are at least 13 different types of diplomacy, each differentiated by the means employed and the ends sought. Now they can vary from traditional and commercial through to deterrence and right through to coercive diplomacy. With our focus over the previous decade on operations, it is easy to forget many of the other tasks that the military has to undertake to achieve the degree of influence that the Government seeks in the international arena. However, air power is a tool that can contribute to many of those diplomatic tasks.

The most visible of them, of course, are the humanitarian aid tasks that we have engaged in—from the 2004 Indian Ocean tsunami assistance, earthquake relief tasks in Pakistan and Iran and New Zealand, flood and cyclone relief in Australia, through to the support to Japan in the aftermath of last year's tragic tsunami.

Traditional diplomacy is performed by government officials in the course of normal international relationships. But there are many instances where foreign governments and their citizens actually interact with the military far more regularly than they do with members of the foreign affairs service. For the Air Force, this means that every airman or airwoman who serves abroad or interacts with foreign military is a diplomat of sorts. This rationale elevates engagement to a higher level of importance. The RAAF has a long history of engagement and I believe that the more we engage with other air forces through exercises and exchanges, the more normalised our interactions become. This approach builds understanding and cooperation at both the strategic and tactical level and I think it is highly important to the evolving contemporary environment. Actually, there are some great examples in the audience today: Air Chief Marshal Sufaat from the Indonesian Air Force attended our higher Staff College; our current Defence Secretary, Duncan Lewis, attended the Indonesian Staff College; the current Chief of the Malaysian Air Force, General Rodzali, attended Australian pilots course; and I am sure there are more than a couple of members in the audience who have done exchange duties with different nations.

Of course, air diplomacy works best before the crisis emerges, but its results are largely intangible. How do we prove that the diplomatic actions we undertook contributed to the ability to reduce the potential for a crisis? How do we justify in financially constrained environments that our actions were actually cost effective? How do we present a business case for something that cannot be proved? The answer is we probably do not. We acknowledge the efficacy of diplomacy as a component of national security and we undertake a range of activities that fulfil our operational requirements while actually cultivating our air diplomacy endeavours.

Air Power Operations

But the question we actually seek to answer is what role air power plays when other forms of diplomacy fail and a government turns to a coercive diplomatic approach. Our speakers will describe how coercion is not a binary, on-off framework. The type and scale of response will be dependent on the situation and the objective. Air power can be reactive or proactive, depending on the situation that the government faces. It can provide options that can be proportionate and discriminatory as required to achieve the desired objective. And I do not think any of us should be in any doubt that strategic decision-makers expect to be provided with a range of response options from which to choose; options that actually allow greater political scope.

As you will hear, a central characteristic of coercion is the scaled use of measures designed to influence another state where their behaviour is at odds with accepted norms. An unwillingness to shift requires a new level of coercion and it is within this space where I think air power can be so effective. As we saw in the Libyan operations, air power can turn the tide in favour of whichever side is able to use it most effectively. In Libya, the scalability of air power can be seen through the transition from a no-fly zone into operations against Libyan loyalist ground forces. The establishment of a no-fly zone successfully stopped Gaddafi using his air power against the rebels. When his ground forces continued to target civilians, air power impeded much of his ground force's mobility. This action not only reduced the amount of civilian casualties, but also enabled the rebel forces to gain the upper hand. I think, in short, we can say that air power shifted the asymmetrical advantage across to the rebel forces.

Air power's flexibility as an instrument of national policy, whether it be coercive, humanitarian or whatever, is probably one of the key capabilities the RAAF can bring to the Government. And for our strategic decision-makers, there must be a clear understanding of what air power can and cannot achieve when we are looking at a coercive diplomatic approach.

We will all observe over the next few days some of the important insights that came out of the Libyan conflict. From my point of view, one of the most important is that precision relies not just on the delivery platform, but on the systemic capabilities that underpin the weapon system. Intelligence and persistent ISR (Intelligence, Surveillance and Reconnaissance) are critical to achieving the level of precision that our governments have come to expect. We cannot attain the level of precision expected unless we achieve fidelity in the analysis of our ISR. Now, while some of the processes can be automated, the real driver behind this fidelity is people, both numbers and skills. The greater the level of precision, the more specialised people and skills we need.

Our Air Force is probably fortunate to be bringing on line some very good quality ISR capabilities, like Wedgetail, the P-8 and long-endurance unmanned systems. Much of our Reshape/Rebalance activity is actually directed towards growing some of those skills.

There is probably another lesson that I would like to take out of the Libyan campaign. For me, it was one of the major lessons and that was the criticality of electronic warfare to NATO's ability to employ air power to the desired level. Even in a relatively low-threat environment like Libya, aircraft can still be vulnerable to the capabilities of the adversary's air and land defence systems. Electronic warfare reduces the risk and substantially increases the chances of mission success. Operation *Odyssey Dawn* actually saw the debut of the E/A-18G Growler and I think that that was a very significant debut. It was instrumental in shutting down the majority of Libyan surface-to-air missile systems and opening the door for

other aircraft to have unimpeded access across Libyan airspace. Success in the current and future battlespace rides on the ability to use reactive and pre-emptive electronic jamming of airborne and land-based radar and communication systems. I believe the Growler would provide the joint force with a combat advantage that would be a decisive effect in any sort of joint operation.

While I am on lessons and criticality of air power options, in my mind, we do four things in air power: airlift, ISR, strike and control of the air, and I always say the most important aspect of what we bring to the joint fight is the control of the air aspect.

Why Fifth-generation?

Now, I just want to take a couple of moments to go through maybe a justification for fifth-generation aircraft versus fourth-generation aircraft, because that is often a subject that comes up a lot, even internal to our Air Force. I was fortunate to go to a *Red Flag* exercise about five or six years ago and, having flown in them in F-111s, I was always keen to see what the Red Air side was like. I managed to get a ride in an F-15D, which in my view was the pre-eminent fourth-generation fighter of its time. I was actually looking forward to this mission because, having been subject to Red Air on Nellis *Red Flags* before, I would have liked to have actually taken some names myself as a Red Air player. Unfortunately, on this particular exercise, our F-111s were actually being escorted by F-22s—I had not actually taken that into my calculus as we went up for this particular mission. We launched off and the first time into the airspace, we got about 40 miles in before we were called 'dead', and had no idea how we had been shot or what had happened. I thought, 'Oh well, we can be unlucky the first time'. The second time, I think we only got 35 miles into the airspace before we were called 'dead'. The good thing about being Red Air is that you can actually regenerate after you have been 'killed' a few times. I did not actually realise we were going to regenerate five times during this mission! Such was the classic difference, I think, between a fourth-generation and a fifth-generation aircraft. Now, a lot of people put that down to stealth; I put that down to the situational awareness that a fifth-generation aircraft gives to you. I define situational awareness as that intersection between what has happened, what is happening and what might happen. It was fascinating to go and view the debrief on the F-22 and just see the level of situational awareness they had in that particular mission compared to us. So, in my view, if we want to be a first-rate air force, there is no choice other than to go to a fifth-generation platform. I am always reminded of General Kenney's comments—he was the Air Component Commander for MacArthur in the Pacific War. He said, 'Air Forces are a bit like poker hands, the second-best one costs you a lot and gets you nothing', and I think that is one of the things we should think about.

Numbers of Fighters

The other aspect I would like to have a look at is capacity and numbers of fighters. In high-end warfighting, capacity counts almost as much as capability. To give you an example, during Operation *Iraqi Freedom*, just to maintain three Combat Air Patrols (CAPs) 24/7 at 600 nm from base required 155 fighters.

To enable any operations, whether they were ground or air, required a CAP posture. There were three CAPs established—each CAP had four fighters, a counter-rotating pair plus an additional one on the tanker. This CAP posture was about 60 miles from Baghdad and about 600 miles from Al Udeid and it was kept up 24/7. On the initial planning for *Iraqi Freedom*, we took one of the slots there; the bottom right-hand CAP we had for eight hours. That was our responsibility— No 75 Squadron did that. We had 14 fighters deployed over there and it required 12 serviceable fighters each day to actually man that eight-hour slot—a counter-rotating pair, two on the tanker, two would come off the tanker and go back into the counter-rotating pair.

My point is that that particular operation, which was fundamental to the whole of Operation *Iraqi Freedom*, took 155 fighters. Fighters are not a boutique capability, numbers count. Consider what would be needed to provide a CAP over any sort of maritime operation; you can just imagine how many fighters would be required to keep a CAP overhead, and provide any sort of close air support or any other strike. So, in my view, 100 fighters is the absolute minimum that the ADF needs if it really wants to stay a balanced force. But that is just a little bit of my experience of air power. We are fortunate here today to have a lot of guest speakers who will share their more recent experiences and observations from the Libyan operation.

Conclusion

In closing, over the following days I want you to reflect on what was achieved in the Libyan operation as well as what was not. Air power helped ensure that civilian deaths at the hands of troops loyal to Gaddafi were reduced and I would argue that air power directly contributed to halting the actions of the Gaddafi regime, through the support of the rebel alliance. But because Gaddafi did not capitulate to the United Nations or NATO, we have to question the effectiveness of the coercive strategy. So as we progress through the conference, I challenge you to ask the following questions. What was the strategic coercive objective? What was the true effect of air power?

As I said before, the face of modern air power is changing. Our approach to air power today will shape our ability to influence events of tomorrow. While we did not play any role in the Libyan campaign, the Australian Government could call on us in the future to do something similar. Our Air Force needs to continue to understand the dynamics and politics of complex security circumstances like Libya, so we are best placed to offer expert intelligent advice to Government on the

use of air power. As our Air Force has no recent first-hand experience of coercive diplomacy, we actually need to learn from others. So I invite you to listen with interest to our speakers over the following days.

Historical Overview of Coercive Diplomacy

Dr Chris Clark

Distinguished guests, ladies and gentlemen, I have been asked to provide some historical context to the term 'coercive diplomacy', not for any special knowledge that I have of the events in Libya. I thought I would do this by exploring where the term came from, what it is held to generally mean, and match that to provide a bit of understanding for the use of the term at this conference.

The term coercive diplomacy has been in RAAF doctrine for a decade plus. I am sure members of the RAAF, who are avid readers of our doctrine, would be aware of this. Although it is actually not in the current iteration of our doctrine—that is still the 2007 edition[1]—it is found in 4th edition (2002), and even has a mention in the 3rd edition (1998). So, on the basis of that, we have been using it in the RAAF for probably about 15 years.

The term has actually been around in a global sense for some 40 years, as a result of the research and writings of Alexander George, an American scholar of international relations.

What is interesting about Alexander George is that his background was primarily with the RAND Corporation for about 20 years (1948–68), where he was studying decision-making and human psychology in international relations. He then moved on to Stanford University in 1968 and it was there that he developed historical case-study methodology to analyse patterns of human behaviour in Cold War foreign policy, especially relating to deterrence and nuclear crisis management.

The point I am making here is that the term is not a military one; it does not even have a lot of diplomatic usage. Its origins are in political science and, within that discipline, it is of special interest to behavioural scientists.

The meaning George ascribed to coercive diplomacy becomes somewhat clearer when we look at where he used it in his publications:

- The Limits of Coercive Diplomacy; Laos, Cuba, Vietnam (edited with Williams Simons), 1971

- Forceful Persuasion: Coercive Diplomacy as an Alternative to War, 1991

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1   Royal Australian Air Force, Australian Air Publication 1000–D—*The Air Power Manual*, Fifth Edition, Air Power Development Centre, Canberra, 2007.

It is very interesting that his first publication dealing with this subject was describing coercive diplomacy's limitations, and he linked it particularly to case studies of Laos, Cuba and Vietnam. When he set about codifying his observations, he used 'forceful persuasion' as his preferred terminology. The key thing, I think, is that he saw coercive diplomacy, or forceful persuasion, as an *alternative* to war. That is not to say that he saw it as deterrence, which has a wholly different body of thinking and doctrine behind it.

What is also especially interesting are the conflicts to which George saw his concept of coercive diplomacy applying, as follows:

- 1941 - US threat of oil embargo against Japan over China

- 1961 - US defence of royalist forces in Laos

- 1962 - Cuban misile crisis

- 1964 - start of US bombing of North Vietnam

- 1980s - US attempts to limit Marxist influence in Nicaragua

- 1986 - US airstrike to end Libyan regime's terrorist activities

- 1990 - international coalition to evict Iraqi invasion of Kuwait

I am not sure that people using the term these days would automatically think of some of these as examples. It is also striking how many of these examples involve the unsuccessful employment of coercive diplomacy. There are two things that stand out in particular from this list. The first is the great variety of events to which the term can be made to apply; very few cases look the same. The second is the number of instances in which air power had a major role.

It is notable that other theorists writing after George now maintain that there have been 12 instances of the use of coercive diplomacy since the end of the Cold War alone. I think that is a good indication of the great variety of cases where coercive diplomacy was thought to apply. It also draws attention to the fact that there are many cases where people—specialists and non-specialists alike (people like journalists)—are sometimes misusing the term and applying it by mistake to situations as diverse as Somalia, Iran, North Korea and endless other places.

Essentially, political scientists view coercive diplomacy as a political-diplomatic strategy, or a foreign policy tool, and not primarily a defined course of military action at all. According to this definition, the resort to brute force ought rarely to come into play. In that respect, it does share many similarities to deterrence theory, except that instead of seeking to discourage an opponent from initiating an unwanted action, coercion is employed to stop the unwanted action or in some other way moderate its course or get the opponent to modify their behaviour. In this respect, it is similar but different to compellence theory, which was expounded

by other scholars like Thomas Schelling, also an American writing in the mid-1960s.

There are some other problems with the use of coercive diplomacy. What is the difference between it and other terms referring to use of military force as a measure of muscle to coerce, intimidate or threaten an opponent in the pursuit of a specific political goal? More fundamentally, what has the use of such tactics got to do with the supposedly genteel art of diplomacy?

According to Sir Harold Nicolson, who was the authority on British diplomacy in the early 20th century, diplomacy is about the 'management of international relations [usually] by negotiation'.[2] That is taken to refer to the practice of artful negotiation—something polite, dignified, tactful, subtle or nuanced. The sort of thing that reportedly prompted Charles Maurice de Talleyrand, France's Foreign Minister at the time of the French Revolution, to respond when told that the Turkish Ambassador had died, 'I wonder what he meant by that?'

Linking the diplomatic function to brute military force for the purposes of coercion and intimidation smacks of creating a new term out of opposing and contradictory ideas; creating an oxymoron on par with other classics of our age, like 'military intelligence' or 'IT support'—'coercive diplomacy'?

What is the difference, we could ask, between the approach to international relations adopted by Theodore Roosevelt when he was President of the United States between 1901 and 1909. He described his approach to foreign policy as, 'Speak softly, and carry a big stick';[3] hence the term 'big stick diplomacy', sometimes referred to as 'carrot and stick diplomacy'.

We also have the example of 'gunboat diplomacy', again originating from the early 20th century, chiefly as a result of the 1911 Agadir crisis. That crisis stemmed from the German action of sending, first, a gunboat (*Panther*) to the Moroccan port of Agadir, and later a light cruiser (*Berlin*), in an attempt to intimidate France and Britain into acknowledging Germany's 'Great Power' status.

In all these instances, however, the use of force was only threatened or implied. So what then is the difference to coercive diplomacy?

I mentioned earlier that air power featured among the examples of coercive diplomacy cited by Alexander George. We should not be at all surprised by this, because the coercive nature of air power was recognised very early on by thinkers and commentators on military employment of aircraft, and you can even find references in Douhet's 1921 tract, *Command of the Air*:

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2   Harold Nicolson, *Diplomacy*, Thornton Butterworth Press, London, 1939, p. 15.

3   Quoted in Nathan Miller, *Theodore Roosevelt: A Life*, William Morrow, New York, NY, 1992, p. 337.

> And even if a semblance of order could be maintained and some work done, would not the sight of a single enemy airplane be enough to induce a formidable panic? Normal life would be unable to continue under the constant threat of death and imminent destruction.
>
> General Giulio Douhet,
> Il dominio dell'aria (Command of the Air), 1921

Operationally, the notion of intimidation to enforce compliance featured heavily in the policy of 'air control' practised by Britain on the frontiers of its Empire between the World Wars; hence, it is often referred to as 'colonial policing', or 'ColPol'. The popular idea was that the RAF was employed to bomb remote villages (sometimes specific houses within a village) in places like Iraq, the North-West Frontier, Transjordan, Aden and other outposts of that nature, but always only for punitive effect, rather than to inflict heavy damage. However, the tactic was employed even in some major centres, as was done during May 1924 when a 520 lb bomb was dropped on Sulaimaniyah, Kurdistan and the next day they dropped another. It was purely to impress the local population.

It first provided the basis for the notion that air forces could be an effective substitute to ground forces in many situations when outright or direct confrontation was not appropriate. The idea was even picked up by some wrong people and put to good effect in the lead up to World War II. We have the example of Hitler's threat in February 1938 to send the Luftwaffe to visit the Austrian capital, Vienna, 'like a spring storm', and that helped ensure the Schuschnigg Government's compliance with the Nazi program to force the unification of Austria with Germany.

Turning to some more recent uses of coercive diplomacy, it is interesting that Alexander George seized on the start of US bombing of North Vietnam in the early 1960s as one example, especially when he included Vietnam among the cases which he referred to as showing the limitations of coercive diplomacy.

I would have thought the *Linebacker* operations, especially *Linebacker II*, ought to have qualified as a successful example. Military pundits are often inclined to hold this up as an example of what could have been achieved with strategic bombing if the US Government had employed unrestrained bombing tactics earlier in war, but I think that misses the point. In the 1972 example, the US aim was purely to force the North back to the negotiating table at the Paris Peace Talks—that is, it was truly a diplomatic objective. They probably could not have got away with it otherwise because it risked bringing China and the Soviet Union into the conflict, which was what had always tied the American hands earlier.

Although more problematic, we probably could also lump in the Israeli use of a surgical air strike to eliminate the Osirak nuclear reactor, which Iraq's former dictator Saddam Hussein had under construction in the early 1980s.

We could probably also include the same tactic used against a suspected nuclear facility in eastern Syria a quarter of a century later on 6 September 2007.

The point about the Osirak strike, in particular, is that there are those who argue that, far from forcing Iraq to stop or modify its behaviour, the Israeli action merely drove Saddam Hussein's program to develop weapons of mass destruction (WMD) further underground. But in its outward form of employing limited force to achieve a narrow political aim, this was arguably coercive diplomacy.

Inflicting punishment and sending an unambivalent political message was also the purpose behind the US use of an air strike against Muammar Gaddafi's regime in Libya in 1986, Operation *El Dorado Canyon*.

The point of Operation *El Dorado Canyon*, which was of great interest to the RAAF as the only other operator of F-111 aircraft, was that it employed a strike force built essentially around the F-111 and was intended to warn off Colonel Gaddafi from sponsoring further terrorist actions against American interests across Europe. The operation was not wholly successful, in that it failed to deter Libya from mounting the midair bombing outrage which brought down Pan Am Flight 103 over Lockerbie, Scotland, in December 1988, but it is generally held that Gaddafi became noticeably quieter and more circumspect after his residential compound in Tripoli had received a 'spring storm' visit from the USAF.

Given the special focus on Libya at this conference, it is particularly interesting that one policy analysis group produced a report in 2006 which argued that coercive diplomacy had actually worked on Gaddafi in an entirely different way. It was argued that, as a direct result of the policy of military intervention adopted by the US towards Iraq and Afghanistan, Libya was prompted to voluntarily renounce its WMD programs and its support for terrorism—it even settled the Lockerbie case. It was claimed this change of heart came five days after the US forces captured Saddam Hussein. It claimed also that this amounted to the 'de-roguing' of Libya. I guess this is a case that shows the great difficulty in identifying specific cases of successful use of coercive diplomacy, when you are looking at something that has an effect quite outside the sphere that actually applied.

In between the 1986 action against Libya and the 2003 invasion of Iraq, which ended Saddam Hussein's regime, we can also identify the air campaign which preceded the *Desert Storm* operation to end Iraqi occupation of Kuwait in 1991.

Although, as it worked out, the principal utility of the bombing was to avoid military embroilment and the preliminary bombardment of Iraqi targets proved essential to the softening up of the opponent prior to a necessary ground attack, it can also be viewed as an attempt to implement coercive diplomacy ahead of all-out war. The Iraqis could have taken the hint as to what was to come and voluntarily relinquished Kuwait, but they chose instead to dig in.

Probably the most outstanding use of coercive diplomacy in recent times was on display during the Kosovo conflict in 1999. Serbian leader Slobodan Milosevic attempted to portray NATO's action against him as a 'war of national survival', although he almost certainly understood that it was actually aimed at removing his regime. NATO used air power as a means of minimising the risk of casualties to its forces, while applying maximum pressure on the Serbian leadership to stop ethnic cleansing practices in Kosovo; a classic use of coercive diplomacy.

The range of instances in which coercive diplomacy can be said to have been employed before Libya in 2011 shows that the circumstances in which such an approach might be relevant are really quite diverse. The point that can be made here is that the applicability of coercive diplomacy is often imprecise and ambiguous. It is as much about influencing opponents in ways that are very hard to measure for effectiveness. It also offers useful caution against dissipating the powerful effects of air power if the only purpose intended is to 'send a message'. I know that Ben Lambeth is here at this conference, and I am sure he is capable of remaking the point he has stated before that air power is, at bottom, a blunt instrument designed to break things and kill people in pursuit of clear and militarily achievable objectives. Using it in the pursuit of diplomatic, 'subtle' messages always risks being heavy handed.

Regardless of how military professionals would prefer to see air power employed, the pattern of use that has emerged over recent decades suggests the likelihood is that politicians will still want to avoid military embroilment in many situations, and it means coercive diplomacy is likely to remain in fashion (probably increasingly) in future.

Without pre-empting the deliberations of this conference in any way—and separate to all the discussion of features, characteristics and influencing factors identified in political science literature on coercive diplomacy—I think, as an historian, I would like to offer three observations about the use of coercive diplomacy, which seem to step out from a consideration of historical examples:

- Firstly, if you are going to engage in coercive diplomacy, the threat presented to an opponent needs to be credible and convincing—empty threats obviously will not cut it.

- The party doing the coercing may have to be prepared to sustain their threat for a longer rather than a shorter period of time; in which case the opponent must be made to see (and believe) that the necessary resolve is there to last the distance.

- Although the level of force (threat) initially applied may be limited, there must be a believable capacity to escalate, as required.

The Middle East's Changing Strategic Environment and the 'Third Arab Awakening'

Professor Amin Saikal

The Middle East—the oil-rich region stretching from Afghanistan to Morocco—is in the grip of an evolving strategic environment. The old regional order and correlation of forces that until recently exemplified the remnants of the Cold War era, despite the US-led interventions in Iraq and Afghanistan to alter that order, is now vulnerable to more strategic shifts than ever before. At this stage, one cannot be certain about the depth, intensity and consequences of the emerging environment in the short run. A host of interconnected variables are at work in shaping it. However, by examining the most salient of these variables in the context of parallel or conflicting ideological and *realpolitik* objectives, interests and capabilities, it is possible to gain some reasonable insights into what direction the regional strategic environment may take in the medium to long run. As the situation stands, the main indicators point to a Middle East that would be dominated by more political pluralism and accountability than authoritarianism, more *Ijtihadi* or reformist (stressing the value of a creative interpretation and application of Islam, based on independent human reasoning) rather than *Jihadi* or combative Islamism, yet more political and sectarian splits and Saudi-Iranian rivalry than across-the-board political and social reconciliation, a festering Palestinian problem, and serious economic concerns, with regional actors and outside powers scrambling for leverage to influence the strategic shifts in their favour in one way or another.

The Arab Revolts and Ijtihadi Political Islamism

Although there is no precise and concise definition of what constitutes a strategic environment, in broad terms it means the geopolitical space within which grand strategies are conducted that encompass the calculation and projection of military, economic, diplomatic and moral resources by various actors from within and outside that space during both peace and conflict.[1] In this, the issues to be taken into account include 'the importance of geographical configurations and location

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1   For more on grand strategy, see B.H. Liddell Hart, Strategy: The Indirect Approach, Faber and Faber, London, 1967.

within which political power is exercised',[2] geographical centrality, balance of power and security parameters, and spillover effects where conflict or politics in one state directly affect political organisation and behaviour in adjacent states.[3] It is in this context that the Middle East strategic environment is currently experiencing a metamorphosis.

The Arab people's anti-authoritarian uprisings since January 2011 have altered the regional dynamics. Although popularly dubbed as the 'Arab Spring', the uprisings constitute more of an 'awakening' than a 'spring', given the carnage that has accompanied and may continue to feature in them, although in varying degrees from country to country. This 'awakening', which denotes a higher political and social consciousness and interconnectedness on the part of many segments of the Arab domain than in any other time in history, is the third in the last fourteen centuries.

The first came with the advent of Islam in the early seventh century which propelled the Arabs to spearhead the building of a multiethnic and multicultural empire of faith, and a majestic civilisation. However, their glory and pride were dealt a serious blow with the Mongolians' sacking of Baghdad in 1258. From that point the Arabs lost control of their destiny, which came to be decided at first by the Ottomans—the convert of Arabs into Islam—and subsequently by European colonial powers, Great Britain and France in particular, and after World War II by US geopolitical pre-eminence in the Middle East. A sense of humiliation and disempowerment gripped the Arab peoples. The creation of the state of Israel in 1948, on what was traditionally regarded as Arab Palestinian land and the country's strategic edge in partnership with the United States from the late 1950s and defeat of surrounding Arab countries in the first Arab-Israeli war, added salt to the wound.

However, these developments also helped spawn the second Arab awakening, led by Gamal Abdul Nasser, who overthrew the pro-British monarchy and declared Egypt as republic in 1952, with a professed anti-colonial, anti-imperialist, anti-Zionist, and pan-Arabist agenda. Nasser's brand of radical Arab nationalism helped many Arabs fulfil their yearning for freedom and self-determination, but also concurrently plunged the Arab world into a cold war of its own,[4] pitching

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2   Geoffrey Sloan, 'Sir Halford J. MacKinder: The Heartland Theory Then and Now', in Colin S. Gray and Geoffrey Sloan (eds), *Geopolitics, Geography and Strategy*, Frank Cass, Abingdon, 1999, pp. 15–38 at p. 20. For a discussion on geopolitics, see Saul Bernard Cohen, *Geopolitics: The Geography of International Relations*, Second Edition, Rowman & Littlefield, Lanham, MD, 2009; and Gray and Sloan (eds), *Geopolitics, Geography and Strategy*, esp. chs. 1, 2, 6, 7, 9 and 11.

3   Kemal Kirisci and Gareth M. Winrow, *The Kurdish Question and Turkey: An Example of a Trans-State Ethnic Conflict*, Frank Cass & Co., London and Portland, 1997, p. 19.

4   For details, see Malcolm Kerr, *The Arab Cold War: Gamal 'Abd al-Nasir and His Rivals, 1958–1970*, Oxford University Press, New York, 1971.

the pro-Nasserite forces against conservative ones, led by oil-rich Saudi Arabia. It failed to deliver to the Arabs any democratic reforms; if anything, Nasser's policies under the circumstance of hostilities with Israel and defiance of the West strengthened the forces of authoritarianism.

The Arab popular uprisings since January 2011, spearheaded by pro-democracy elements, mark the third Arab awakening. They have been in pursuit of genuine self-determination against the backdrop of chronic political repression, substantial demographic changes in favour of younger and more connected generations, high unemployment and inflation, climatic changes, including long drought periods, rising food prices, widening socio-economic inequalities and injustices, intellectual stagnation and outside interference.[5] The toppling of Ben Ali in Tunisia, followed shortly by Husni Mubarak in the Arab world's most populous and pivotal state, Egypt, highlighted the power of diffusion between Arab peoples, and, more importantly, opened the way, for the first time in Arab history, for grassroots political activism and pluralism. The Tunisian and, more importantly, Egyptian revolts entailed spillover effects in providing incentives for the opposition in other Arab counties, resulting in bloody conflicts in Libya, Syria, Bahrain and Yemen, and pressuring Algeria, Morocco, Jordan and most of the oil-rich Gulf Arab states, including even Saudi Arabia, to promise, and in some cases enact, some political reforms as rearguard actions.

In the countries where the struggle has been bloody, each has had its own story. The oil-rich Libyan dictator, Muammar al-Gaddafi,[6] who was courted by the West for too long, was overthrown with critical assistance from an UN-approved NATO intervention.[7] In Bahrain, the ruling Sunni Arab family has continued to suppress the majority Shi'ite opposition, whilst promising a range of, though as yet largely unfulfilled, reforms.[8] In Syria, the minority Alawite ruling elite under Bashar al-Assad has managed to hang on to power by the large-scale use of brute force against the mainly Sunni majority opposition, resulting so far in the killing

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5   See Amin Saikal, 'Authoritarianism, Revolution and Democracy: Egypt and Beyond', in *Australian Journal of International Affairs*, vol. 65, no. 5, November 2011, pp. 530–544.

6   Editor's Note. Because of the lack of standardisation in transliterating written and regionally pronounced Arabic, Gaddafi's name has been Romanised in many different ways. Versions used in Western media have included Gaddafi, Gadhafi, Qadhafi, Qaddafi and Kadafi. For standardisation, Gaddafi has been used in these proceedings as it is the most commonly used version in Australia.

7   On issues stemming from this intervention, see Ted Galen Carpenter, 'NATO's New Problem: Post-Qaddafi Libya?', CATO Institute, 18 August 2011; and Amitai Etzioni, 'The Lessons of Libya', in *Military Review*, January–February 2012, pp. 45–54.

8   In Bahrain, tensions continue to simmer between the Shi'ite majority and Sunni monarchy. See Ethan Bronner, 'Bahrain Vote Erupts in Violence', in *The New York Times*, 24 September 2011; and Taieb Mahjoub, 'Bahrain for Dialogue, Will not Tolerate Violence: Minister', in *The Daily Star,* 24 May 2012.

and wounding of thousands of unarmed protestors and physical destruction of many towns and their historical sites.[9] The sectarian and material support given to the regime by Iran and political and diplomatic protection offered by Russia and China—all for geopolitical reasons—have been instrumental in this respect. In the case of Yemen, its longstanding dictator, Abdullah Ali Saleh, finally bowed out late last year in favour of his loyal Vice President, Abdrabuh Mansur Hadi. But the jury is still out on whether Hadi will be able or willing to institute a credible transition.

Whatever the future course of developments, the events have thus far altered the correlation of forces on the ground and opened the arena for strategic shifts in the Middle East. They have given popular rise to political pluralism, enabling political Islamists in the Sunni-dominated Muslim Arab countries, where the dictatorial rulers have fallen or weakened, to gain unprecedented electoral legitimacy and political ascendency. They have already won parliamentary elections in Tunisia and Egypt, and seem to be destined to play an important role in Libya and Yemen as well as Syria, should Assad's regime fall, and to occupy wider political space in most of the other Arab states.

Of course, not all the Islamists are of the same ideological texture. In general, political Islamists are those who believe in Islam as an ideology of political and social transformation of their societies. Some believe in the use of violence, such as al-Qaeda operatives and the like, but most reject any form of violence as a means to achieve their objectives. The bulk of Muslim thinkers, intellectuals and activists belong to the second category. Even so, they come with different ideological shades and political stresses.[10]

For example, in Tunisia, the Al-Nahda party, led by Rashid al-Ghannushi, has already proved to be moderate, pragmatic and inclusive, with a serious commitment to Tunisia's transformation into a democracy that is compatible with an *Ijtihadi* or reformist Islam.[11] In this, it has paralleled the ruling Turkish Justice and Development Party (AKP), which has dominated Turkish politics since 2002.[12] On the other hand, the Egyptian transition has proved to be more complex and unpredictable. The politically dominant Muslim Brotherhood cluster, whose Freedom and Justice Party (FJP) secured 37.5 per cent of votes in the 2011 parliamentary election, has in general voiced a commitment similar

9   The Syrian conflict has also spread to Lebanon. See Neil MacFarquhar, 'Conflict Rooted in Syria Spreads to Lebanon's Capital', in *The New York Times*, 21 May 2012.

10   Amin Saikal, *Islam and the West: Conflict or Cooperation?*, Palgrave Macmillan, Basingstoke, 2003, pp. 20–23.

11   See Alfred Stepan, 'Tunisia's Transition and the Twin Tolerations', in *Journal of Democracy*, vol. 23, no. 2, April 2012, pp. 89–103.

12   For a discussion on the AKP, see Umit Cizre (ed.), *Secular and Islamic Politics in Turkey: The Making of the Justice and Development Party*, Routledge, Abingdon, 2008.

to that of Al-Nahda, and signalled a pragmatic foreign policy stand. However, its core supporters also include elements who have called for a *Sharia* (Islamic code)-based transformation of Egypt. Closely identified with these elements is the movement's wealthy strongman Khairat al-Shatter.[13] In addition, the Brotherhood's more conservative and traditionalist Saudi-backed Salafi counterpart, Al-Nur, which won 27.8 per cent of the vote in the parliamentary elections, has vowed to pursue the creation of an Islamic order.[14] Some Salafist elements have also been responsible for a number of clashes with Coptic Christians, who form some 10 per cent of Egypt's 85 million population.

Opposing the political Islamists is an array of pro-democracy and secularist elements, whose disorganisation and fragmentation have so far thwarted their chances of electoral success. Standing above the shoulder of these forces is Egypt's Supreme Council of Armed Forces (SCAF), to which Mubarak passed on the transition torch. Representing the armed and security forces, which have had close ties with Washington, the Council has grudgingly been forced to move down the path of electoral democracy, whilst doing what it can to safeguard its own interests.[15] Just prior to the presidential election in July, SCAF not only implemented a Supreme Court order to close down the Islamists' dominated National Assembly as 'unconstitutional', but also granted itself unlimited powers to make the forthcoming elected President answerable to it and to play a determining role in shaping Egypt's political direction.

However, once the Muslim Brotherhood's candidate, Mohammad Morsi, won the mid-2012 presidential election, a predictable power struggle between the elected president and SCAF came to loom. Within a month in office, Morsi proved to be a shrewd political player. Whilst courting SCAF politely, he skilfully capitalised on the killing of a number of Egyptian troops by Islamic militants on the increasingly insecure border with Israel and Gaza to exert his authority over SCAF. Without blaming the military for its failure to prevent the death of its soldier, he ordered military actions against the Islamic militants responsible for the killing, and as such also reassured Israel and the United States that he sang from the same page as them when it came to security issues and maintenance of peace with Israel and

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13   The Muslim Brotherhood is made up of a spectrum of Islamists. Nathan J. Brown, 'The Brotherhood's Coming-Out Party', in *Carnegie Endowment for International Peace*, 24 March 2011. For more on the Brotherhood, see Richard Paul Mitchell (ed.), *The Society of the Muslim Brothers*, Oxford University Press, Oxford, 1993; Barry Rubin, *The Muslim Brotherhood: The Organization and Policies of a Global Islamist Movement*, Palgrave Macmillan, New York, 2010; and Alison Pargeter, *The Muslim Brotherhood: The Burden of Transition*, London: Saqi Books, London, 2011.

14   Ed Husain, 'Should Egypt Fear the Rise of the Salafis?', in *The Atlantic*, 4 December 2011.

15   See Oren Kessler, 'Islamists and SCAF in Marriage of Convenience', in *The Jerusalem Post*, 30 November 2011; and International Crisis Group, *Lost in Transition: The World According to Egypt's SCAF,* Middle East/North Africa Report No. 121, 24 April 2012.

close ties with the US. As a corollary, he surprisingly announced the appointment of a new Defence Minister, General Abdelfatah al-Seesi, to replace the head of SCAF and veteran Defence Minister under Mubarak, Field Marshall Hussein Tantawi. Along with this, he also retired the Chief of Staff, General Sami Enan, but decorated both with Egypt's highest medal and appointed them as military advisers to the President. Further, he announced a non-Muslim Brotherhood Prime Minister, and a cabinet that includes a number of figures from the Mubarak era, with no links to Morsi's party. His actions attracted considerable support inside Egypt and improved his standing in the region and beyond. Although many among the Egyptian liberals and business community still remain sceptical of Morsi's intentions and his popularity since his election has declined, he has so far adopted steps that seem to be in line with Egypt's transition to a politically pluralist future.

The Libyan situation appears to be heading in a similar pragmatic direction. Although the head of the country's Transitional Council, Mustafa Abdul Jalil, initially stated that in the post-Gaddafi order all laws would have *Sharia* as their 'basic source',[16] and as a consequent he decreed the annulment of a number of laws which have been deemed contrary to *Sharia*, including those that banned polygamy and the Islamic banking system, it was nonetheless the liberal groups that won the July 2012 parliamentary elections. This is not to claim that the Libyan case is any more straightforward than that of Egypt. To the contrary, Libya is in the throes of more political and social divisions, whose complexity is compounded by virtual disintegration of the state, as happened in Iraq in the wake of the US invasion and toppling of Saddam Hussein's dictatorship in 2003.[17] There are also many Libyan Islamists who prescribe to a reformist interpretation and application of Islam. Even so, for the time being, it appears that Libya is on course for pluralist developments, where compromises have to be made between various political and ideological groupings as basis for the growth of a non-extremist political order.

What the Arab awakening has done is to create a climate in which people are no longer afraid of voicing their demands and aspirations, and to fight for them if necessary. Whilst it is not possible to be precise about its implications at the regional level, in general the empowered political Islamists can be expected to advocate, as some of them have already done, a foreign policy posture which would be more in line with their Islamic ideological disposition, but within the limits of their domestic needs in maintaining power and authority, although through political competition and contestation.

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16   Richard Spencer, 'Libya's Liberation: Interim Ruler Unveils More Radical than Expected Plans for Islamic Law', in *The Telegraph*, 23 October 2011.

17   See Brookings Institution, *Iraq Index: Tracking Variables of Reconstruction & Security in Post-Saddam Iraq*, Saban Center for Middle East Policy, 30 September 2010.

They can be anticipated in the years ahead to press for greater independent foreign policy stands, with a strong tendency to be less accommodating towards Israel and less receptive of the traditional US geopolitical dominance in the Middle East. It would be ideologically remiss of them not to sympathise closely with the Palestinian Islamist group that controls Gaza, Hamas, and up the ante for a resolution of the Palestinian problem, including Israeli withdrawal from East Jerusalem, which the Muslims uphold as their third holiest site after Mecca and Medina. They can count on popular Arab support in this respect. The tide of such sentiment has already been on display, with Islamists' participation, in a series of anti-Israeli developments over the last year. Prominent among them have been an increase in Egypt's border openings to Gaza in breach of Israel's blockade of the Strip,[18] the September 2011 storming of the Israeli Embassy in Cairo over the Israeli killing of three Egyptian border guards, for which Israel apologised,[19] and the most recent unilateral and politically induced cancellation of the Egyptian-Israeli gas contract, which provided 40 per cent of Israel's gas needs.[20] Does this mean that the arena has now opened up wider for Muslim extremist groups to flourish?

In broad terms, the answer is no. A majority of the Arab peoples now want a popularly mandated exercise of power and authority, and establishment of good governance. This applies not only to the countries which are going through political transformation, but also to those where such transformation has not commenced in a substantial way yet. Most political Islamists have to be cognisant of this, as it would be equally required of outside powers to be very understanding of the nature of developments in the Arab domain and respect their popularly mandated outcomes.

Sectarian-political Splits and Saudi-Iranian Rivalry

Another variable springing from changes in the Arab world is the deepening and broadening of sectarian-political fault lines and the Saudi-Iranian proxy conflict for regional influence. As several Arab states, most importantly Egypt, have been seriously disrupted, with their economic conditions weakening in varying degrees, the oil-rich conservative Islamic Saudi monarchy, which claims leadership of the Sunni Muslim world, has found it appropriate to become more assertive as a regional player than ever before, with two main objectives. The first is to make sure that Saudi Arabia, together with its Arab partners within the Gulf

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18   Donald MacIntyre, 'Egypt Softens Stance on Hamas with Move to Open Gaza Border Crossing', in *The Independent*, 30 April 2011.

19   Harriet Sherwood, 'Egypt Declares State of Alert after Israeli Embassy Broken Into', in *The Guardian*, 10 September 2011.

20   Avi Bar-Eli, 'Egypt Cancels Natural Gas Deal with Israel', in *Haaretz*, 22 April 2012.

Cooperation Council (GCC), all of which (with the exception of Bahrain) are also oil-rich, are not contaminated by the popular revolts in other parts of the Arab world.[21] The second is to steer a course of foreign policy behaviour whereby it can limit the space for other regional actors to take advantage of the transformative developments in the Arab world to expand their interests at the expense of those of Saudi Arabia and its allies.

With regard to the first objective, whilst presiding over a sovereign fund of some US$500 billion, the Saudi leadership has engaged in subtle resource diplomacy and geostrategic activities to support those Islamist and secularist forces that are aligned with its national interests and security, including preserving the *status quo* within the GCC.[22] For example, in Egypt it has provided some backing to the Salafists and the Military Council to balance out the Muslim Brotherhood and some of the other groups, which it has regarded as undesirable,[23] and in Yemen it has backed a transition that leaves Saleh's regime largely intact, but without Saleh.[24] Meanwhile, it has deployed troops in Bahrain,[25] reportedly channelled arms and money to the opposition in Syria, and stood shoulder to shoulder with the Arab monarchies, whether in the Gulf or Jordan or Morocco, to maintain the *status quo* within their own borders.

In respect of the second objective, Riyadh has been careful not to allow any strategic space generated as a result of changes in the Arab world to be filled by other regional powers. Two countries that have come under its spotlight are the predominantly Sunni Muslim Turkey and Shi'ite Islamic Iran, although more so the latter than the former. Riyadh has harboured some irritation with Turkey, stemming from the popularity that Turkey has gained among the Arabs, including among a number of non-Salafist Islamist groups. In addition to emerging as an attractive model for many Arabs, Turkey's moderate Islamist AKP has proven acceptable to the US and its Western allies. Led by the charismatic Prime Minister Tayyip Erdogan, it has not only downgraded Turkey's past close relationship with Israel and made a common cause with the Palestinians, but has also been quick to lend moral, political and humanitarian support to Arab popular uprisings, with

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21 The Gulf Cooperation Council (GCC) was founded as a defensive alliance primarily against Iran in 1981, and is composed of Saudi Arabia, Bahrain, United Arab Emirates, Kuwait, Oman and Qatar.

22 For an overview, see Mehran Kamrava, 'The Arab Spring and the Saudi-Led Counterrevolution', in *Orbis*, vol. 56, no. 1, 2012, pp. 96–104.

23 Saudi Arabia sees the Muslim Brotherhood as a competitor against its religious leadership in the Islamic world.

24 Michael Peel, 'Saudi Arabia Pledges $3.25bn Aid to Yemen, in *The Financial Times*, 23 May 2012.

25 Ethan Bronner and Michael Slackman, 'Saudi Troops Enter Bahrain to Help Put Down Unrest', in *The New York Times*, 14 March 2011.

an emphasis on democratic principles and values.[26] In spite of sharing a common sentiment with Ankara in its condemnation of the Assad regime in Syria, Riyadh cannot be pleased about what is viewed as Turkey's growing role in the region. There is a lingering suspicion in a number of Arab circles regarding Ankara's motives, as today Turkey is more influential in the Middle East than it ever has been since the heydays of the Ottoman Empire, when it ruled most of the Arab world.

Saudi-Iranian Rivalry and the Iranian Nuclear Program

However, it is Iran that Riyadh views as the real regional protagonist. It has shown increasing concern about what it perceives as Iran's expanding regional influence and ambitions. It is troubled by not only Tehran's strategic partnership with Assad's regime in Syria and organic links with the powerful Hezbollah in Lebanon,[27] but also its close sectarian-cum-political relationship with Nur al-Maliki's Iraqi Government and certain Iraqi sub-national groups, most importantly that of firebrand Muqtadr al-Sadr and the Islamic Supreme Council for Iraq (ISCI), not to mention some Shi'ite groups in Afghanistan.[28] Hence the Saudi deployment of forces in Bahrain, strong support for the Saad Hariri-led Sunni opposition in Lebanon and certain Sunni groups in Iraq, and the Sunni opponents of the Assad regime in Syria, and strenuous efforts to see that Yemen has a post-Saleh government that is receptive to Riyadh and is capable of preventing Iran from providing support to Yemen's rebellious Shi'ite minority on the border with Saudi Arabia.

An additional dimension to the volatile Saudi-Iranian relationship is Iran's nuclear program, over which Saudi Arabia shares a common concern with its GCC partners as well as the US and some of its European allies, and paradoxically even Israel. Whilst circumspect in its public attitude over what should be done to

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26　See Ziya Onis, 'Multiple Faces of the "New" Turkish Foreign Policy: Underlying Dynamics and a Critique', Center for Globalization and Democratic Governance, GLODEM Working Paper Series, April 2010; and Meliha B. Altunisik and Lenore G. Martin, 'Making Sense of Turkish Foreign Policy in the Middle East under AKP', in *Turkish Studies*, vol. 12, no. 4, 2011, pp. 569–587.

27　On Hezbollah, see Augustus Richard Norton, *Hezbollah: A Short History*, Princeton University Press, Princeton, NJ, 2007. For more on Hezbollah's perspectives, see Nicholas Noe (ed.), *Voice of Hezbollah: The Statements of Sayyed Hassan Nasrallah*, Verso, London, 2007.

28　On Iran's foreign policy and growing role in the region, see Amin Saikal, 'Iran's New Strategic Entity', in *Australian Journal of International Affairs*, vol. 61, no. 3, September 2007, pp. 296–305; and Farhang Morady, 'Iran Ambitious for Regional Supremacy: The Great Powers, Geopolitics and Energy Resources', in *Journal of the Indian Ocean Region*, vol. 7, no. 1, 2011, pp. 75–94 at p. 81. On the Syria-Iranian relationship, see Jubin M. Goodarzi, *Syria and Iran*, I.B. Tauris Academic Studies, London, 2006.

ensure that Iran does not acquire a military nuclear capability, King Abdullah has reportedly favoured the use of force by the US as the last resort.[29]

At this point, it is important to note that neither the International Atomic Energy Agency (IAEA) nor the US and its allies have so far produced any solid proof that Iran has a secret military nuclear program. The IAEA has only raised questions about such a program, based largely on an assessment of the number of centrifuges and the Arak heavy water reactor that Iran has made operational as well as the Iranian refusal to give free access to the IAEA to all its nuclear facilities.[30] In fact, the Obama administration's position is that Iranian nuclear ambitions can be contained through coercive diplomacy, involving sanctions and negotiations. By the same token, in contrast to the repeated warnings by Israeli Prime Minister Benjamin Netanyahu and some of his ministers that Iran is determined to produce nuclear weapons and that Israel will not allow this to happen, several credible serving and retired Israeli military and intelligence figures have confirmed the American position and questioned the efficacy of an Israeli aerial assault on Iranian nuclear installations. The latest figure is Israeli Chief of Staff Lieutenant General Benny Gantz, who has publicly stated that Iran will not develop nuclear weapons and that the Iranian leadership is rational.[31]

Two considerations have cautioned the Obama administration and similarly minded groups/individuals. The first is that, according to credible intelligence sources, the Iranian leadership has not made a decision about whether to go for military nuclear capability. Three competing views seem to be current within the defused leadership and wider Iranian population. One favours nuclear weapons for deterrence purposes. Another argues that possession of such weapons will bring more international pressure and isolation, and could make Iran a target of an Israeli conventional or nuclear attack. The third postulates that Iran should acquire nuclear technology but refrain from crossing the threshold.[32]

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29 The Gulf Cooperation Council (GCC) and Egypt are unlikely to stand idly if Iran develops a military nuclear capability. See Eric S. Edelman, Andrew F. Krepinevich and Evan Braden Montgomery, 'The Dangers of a Nuclear Iran: The Limits of Containment', in *Foreign Affairs*, vol. 90, no. 1, January/February 2011, pp. 66–81.

30 For more on Iran's nuclear capability, see Amin Saikal, 'The Iran nuclear dispute', in *Australian Journal of International Affairs*, vol. 60, no. 2, June 2006, pp. 193–199; and *Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions in the Islamic Republic of Iran*, Report by the Director General, GOV/2011/65, International Atomic Energy Agency, 8 November 2011, p. 10.

31 Gabrielle Rifkind, 'Iran Nuclear Talks: Signs of Cautious Optimism Emerge', in *The Guardian*, 22 May 2012.

32 See International Crisis Group, *US-Iranian Engagement: The View from Tehran*, Middle East Briefing No. 28, 2 June 2009.

The second consideration is that a military attack could only set the Iranian nuclear program back by a few years, but would at the same time mobilise the Iranian public behind what is growingly an unpopular regime, and make the regime accelerate its efforts to produce nuclear weapons. Moreover, in the event of an Iranian retaliation with both its military and non-military capabilities, the region could become an inferno,[33] with far-reaching international political and economic implications at a time when Western economies are in serious difficulty and US-Russian and US-Chinese relations are fragile. However, whilst an Israeli or US or for that matter combined military attack on Iran is not inevitable, if the international talks between Iran the five permanent members of the UN Security Council plus Germany fail to produce tangible results, the risk of a military confrontation and its consequences carry the potential for major regional strategic shifts. It is unfortunate that the nuclear fuel-swap deal, which the former Brazilian President Lula da Silva and Turkish Prime Minister Tayyip Erdogan brokered in May 2010, and whereby Tehran agreed to send 1200 kg of uranium to be enriched in Turkey for its reactors, was rejected by the US and its allies.[34] The Obama administration could have capitalised on the deal to test Tehran's stand.

Yet, all this does not suggest that a direct Saudi-Iranian military confrontation is looming. The constraints under which both sides operate are significant. The Iranian regime is confronted with not only a fragile political system that has pitched the 'sovereignty of God', personified by an unelected supreme political-religious leader, against the 'sovereignty of people', represented by an elected president and legislature,[35] but also severe UN and, more importantly Western, sanctions and isolation, exacerbating Iran's deep-seated economic and social problems.[36] Saudi Arabia faces a daunting leadership succession problem and

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33 For a discussion on Iranian military capabilities in the Strait of Hormuz, see Caitlin Talmadge, 'Closing Time: Assessing the Iranian Threat to the Strait of Hormuz', in *International Security*, vol. 33, no. 1, Summer 2008, pp. 82–117; and Anthony H. Cordesman, 'Iran, Oil, and the Strait of Hormuz', Discussion Paper, Center for Strategic and International Studies, 26 March 2007.

34 Trita Parsi, 'The Turkey-Brazil-Iran Deal: Can Washington take "Yes" for an Answer?', in *Foreign Policy*, 17 May 2010.

35 On this confrontation, see Amin Saikal, 'The Roots of Iran's Election Crisis', in *Survival: Global Politics and Strategy*, vol. 51, no. 5, October–November 2009, p. 92; Ramin Jahanbegloo, 'The Two Sovereignties and the Legitimacy Crisis in Iran', in *Constellations*, vol. 17, no. 1, 2010, pp. 22–30; and Jamsheed K. Choksy, 'Is This Really The End for Ahmadinejad?', in *Foreign Policy*, 24 November 2010.

36 On Iran's faltering economy, see 'Preface' in Amin Saikal, *The Rise and Fall of the Shah: Iran from Autocracy to Religious Rule*, 2nd ed., Princeton University Press, Princeton, NJ, 2009; Jahangir Amuzegar, 'Iran's Economy in Turmoil', in *International Economic Bulletin*, Carnegie Endowment for International Peace, March 2010; and Farnaz Fassihi, 'Iran's Economy Feels String of Sanctions', in *The Wall Street Journal*, 12 October 2010.

limited capability that disallows it from spreading itself too wide.[37] Yet, the two protagonists can be expected to enhance their involvement in proxy conflicts. This is already evident in Bahrain, Iraq and Lebanon, and has taken a sharper dimension in relation to Syria. The Syrian crisis, which has increasingly shaped up as a civil war, largely along sectarian lines, has raised the stakes for both sides.

Major Power Involvement

The scene is set for increased Saudi-Iranian rivalry as a dominant feature of the shifting regional strategic landscape in the coming years. Intertwined with this would be conflicting major power interest and involvement in the Middle East. Irrespective of its renewed emphasis on the Asia-Pacific, the United States can be expected to remain deeply engaged in the region in pursuit of preserving its traditional geostrategic dominance in the area. In this, its policy may continue its present and past contradictory course. With regard to the present, on the one hand Washington has been keen to project a public profile in support of democracy, stability, peace and self-determination in the region. On the other hand, it has also remained steadfast in supporting those forces with whose cooperation it can maintain its influence. Hence, for example, the US support for Saudi Arabia and its GCC partners despite the authoritarian nature of their regimes, and commitment to Israel within a strategic partnership regardless of the Israeli Government's intransigence in negotiating a settlement with the Palestinians within the frame of the internationally-backed two-state solution.[38] In this context, the Palestinian issue is most likely to persist as a festering problem and source of anti-American feelings within the Arab and Muslim world, restraining the empowered Arab Islamist forces from being favourably disposed towards the United States and its allies. By the same token, Israel carries the risk of wider isolation in the region, and should the Arab countries around it take a democratic trajectory, it will not be able to claim the higher moral ground as the only democracy in the region either.

At the same time, Russia and China can be expected to remain supportive of Iran and indirectly some of its allies for both strategic and economic reasons. This is already on display in relation to Syria. Russia's interest in backing the Assad regime is shaped not only by lucrative arms deals and use of Syria's Tartus port, but also by a desire to maintain a strategic foothold in the unpredictably changing Middle East to counterbalance the US and prevent the rise of a Sunni Islamic crescent that could benefit its historical rival, Turkey. It is also instructed by a policy consideration not to see a weakening of Iran, with which it has a US$4 billion

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37 For more on Saudi Arabia, see Tim Niblock, *Saudi Arabia: Power, Legitimacy, and Survival* Routledge, New York, NY, 2006; and Anthony H. Cordesman, *Saudi Arabia: National Security in a Troubled Region*, ABC-CLIO, Santa Barbara, CA, 2009.

38 For a discussion of the US-Saudi relationship, see Parker T. Hart, *Saudi Arabia and the United States: Birth of a Security Partnership*, Indiana University Press, Bloomington, IN, 1998.

annual economic and military trade.[39] Similarly, China has good economic reasons to have a strategic niche in the region. It imports 11 per cent of its oil needs from Iran, with the volume of trade between the two sides reaching some US$45 billion in 2011.[40] Beijing also seems to be uncomfortable with changes in the regional *status quo*, specifically if they involve pro-democracy developments, as well as what it views as America's efforts to promote a policy of containment of China.

The economic variable and youth unemployment

Another variable in the overall calculation must be the economic situation in the countries subjected to leadership changes or embroiled in popular turmoil. This is nowhere a greater issue than in Egypt. The Egyptian economic situation is dire. The country's national treasury is depleted, with sources of income, ranging from tourism to industrial production, falling. Its economy needs an injection of some US$80 billion to enable it to reach an annual growth rate of 7 per cent, as was the case prior to the overthrow of Mubarak, as a minimum foundation for creating more employment opportunities for a swelling unemployed youth. Problematically, that amount of capital is not available from anywhere.[41] The demographic changes in favour of the younger generation have been phenomenal across the region. Overall, 60–70 per cent of the population in each Arab state (not to mention Iran) is below the age of 25.[42] The demand for job opportunities and better standards of living has grown exponentially in most of the Arab states and this trend is set to continue for the foreseeable future, with national consumption outstripping national production. Whoever is in power and outside interested actors will have to give paramount attention to the economy and youth idleness as critical sources of Arab chronic social unrest and political instability.

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39   Nevertheless, it is considered that a triangle of regional competition exists between Russia, Turkey and Iran. See Hooman Peimani, *Regional Security and the Future of Central Asia* Praeger Publishers, Westport, CT, 1998; and Alvin Z. Rubinstein and Oles M. Smolansky (eds) *Regional Power Rivalries in the New Eurasia: Russia, Turkey and Iran*, M.E. Sharpe, New York, NY, 1995.

40   For more on China's complex relationship with Iran, see John W. Garver, 'Is China Playing a Dual Game in Iran?', in *The Washington Quarterly*, vol. 34, no. 1, Winter 2011, pp. 75–88.

41   For more on the Egyptian economy, see Hanā' Khayr al-Dīn (ed.), *The Egyptian Economy: Current Challenges and Future Prospects*, American University in Cairo Press, Cairo, 2008. On some perspectives on the Global Financial Crisis's effect on the Egyptian economy and recent Egyptian policies, see Robert Bowker, *Egypt and the Politics of Change in the Arab Middle East*, Edward Elgar, Cheltenham, 2010; and American Chamber of Commerce in Egypt, *The Report: Egypt*, Oxford Business Group, Oxford, 2010.

42   For instance, on the youth in Egypt, see Ragui Assaad, 'Unemployment and Youth Insertion in the Labor Market in Egypt', in Hanā' Khayr al-Dīn, *The Egyptian Economy*, pp. 133–176; and Bowker, *Egypt and the Politics of Change in the Arab Middle East*, Ch. 3.

Conclusion

A number of variables are now set to dominate and influence the evolving strategic environment over at least the next five years. They most critically include political pluralism and accountability, *Ijtihadi* political Islamism, demand for better standards of living, sectarian-political divisions and conflicts, Saudi-Iranian strategic competition, the Iranian nuclear program, the Palestinian problem and the policy attitude and actions of the major powers toward the region. All indicators point to a changing, although not necessarily less volatile, strategic environment, with major powers playing their part in seeking to influence it according to their geopolitical preferences. The Middle East is on a roller-coaster ride. How the regional leaderships and international actors are going to handle this will be critical to the overall outcome.

Responsibility to Protect: Libya as a Case Study

Professor Ramesh Thakur

Listening to Amin Saikal, I am reminded of a saying that 'if you understand the Middle East, you have been misinformed'! Officers, ladies and gentlemen, I must begin by noting that among all the distinguished Chiefs assembled here for today and tomorrow, I am the only Indian who will be talking to you.

Compared to the old but increasingly questioned paradigm that held international politics to be an unrelenting struggle for power among states, in the new world order a multitude of state and non-state actors will compete for the ascendency of their preferred normative architectures that combine power with vision and values. Reflecting this broader context, the responsibility to protect (R2P) is the normative instrument of choice for converting a shocked international conscience into decisive collective action, for channelling selective moral indignation into collective policy remedies to prevent and stop atrocities. In a speech on 18 January this year to a conference to honour the international commission on the tenth anniversary of our R2P report, UN Secretary-General Ban Ki-moon noted that historically the international community's chief failing has not been too much intervention but rather the reluctance to act in the face of serious threats. The price of this reluctance has been the loss of far too many lives and an erosion of UN credibility. In Ban Ki-moon's view, Libya last year demonstrated that human protection is a defining purpose of the United Nations but, he added, the execution of our collective responsibilities was not always perfect. In UN Security Council Resolutions 1970 and 1973 last year, the United Nations, as the Minister noted at the beginning of his address this morning, for the first time invoked R2P under the coercive Chapter VII of the UN Charter.[1] A year later there was no substantial opposition to R2P as a principle or norm—an international standard of conduct among UN member states and others—despite deep disquiet among many about how it had been implemented by NATO in Libya. During the daylong discussions at the event where Ban Ki-moon spoke, there was a striking depth of consensus in support of R2P principles among state representatives, UN officials and other policy and civil society actors. There was surprisingly shared understanding of the responsibilities, but there was also an underlying unease among many participants, verging on outright distrust in some key sections, about how far UN authorisation

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1   United Nations, *Charter of the United Nations and Statute of the International Court of Justice*, available at http://www.un.org/en/documents/charter/index.shtml, accessed 20 August 2012.

for the Libyan operation had been stretched. The Libyan experience also confirms that the debate on R2P military interventions cannot avoid the importance of state capacity, regime legitimacy and state building.

I will first situate Libya in the context of the wider Arab awakening, but very briefly since Amin Saikal has spoken so well about it, then examine the application of R2P to the crisis and finally discuss the prospects for R2P post-Libya. The one significant regional exception to the worldwide trend of recent decades towards democratisation was the Arab world. The postcolonial Arab state was custom-built to serve Western interests; strong enough to keep the restive natives in check and maintain stability at home, but too weak to challenge foreign influence and too intimidated to champion the Palestinian cause. The legacy of authoritarian Arab rule has been political repression, intellectual impoverishment, economic stagnation, moral exhaustion and disorderly, riskful transitions of power. The broader Islamic world—Indonesia, Malaysia, Bangladesh, Turkey—does not suffer from as total a democracy deficit, and I do want to emphasise that point because of the persistent strains of Islamophobia in the Western world. The problem of democracy is a peculiarly Arab phenomenon, not a broader Islamic phenomenon. President Kennedy opined that 'those who make peaceful revolution impossible will make violent revolution inevitable,'[2] a point that President Assad of Syria might like to ponder on. The Arab internal security states were often propped up, as Amin Saikal reminded us, by powerful foreign patrons. The face of America in the Arab world at the start of 2011 was that of ageing autocrats using US-backed and US-armed security forces to rob and brutalise their own people, while presiding over corrupt and rotting political systems. In the new Arab world order, as the natives began to write their own narratives in 2011, the world's last remaining stronghold of authoritarian rulers was haunted by the spectre of popular democratic revolutions. Most Arabs were seeking what we in the West take for granted: political freedoms, civil liberties, material prosperity, the right to keep legitimately acquired property and wealth rather than have these confiscated by government, and the accountability of rulers to the citizens and also to the rule of law. Unlike Iran in 1979, there were no anti-US death chants in Cairo and Alexandria. Mind you, you always have to take a lot of these chants with a grain of salt. I remember a favourite of mine was a placard displayed by demonstrators in India: 'Yankee Go Home … and take me with you'.

Commentators scrambled to decipher the Arab awakening's larger meaning by anchoring it variously in the revolutions that swept the former Soviet apparatchiks from power across Eastern Europe in 1989, or the anti-Western revolution in

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2   President John F. Kennedy, 'Address on the first Anniversary of the Alliance for Progress', speech given at the White House at a reception for the diplomatic corps of the Latin American Republics, 13 March 1962, available at http://www.presidency.ucsb.edu/ws/index.php?pid=9100&st=those+who+make+peaceful+revolution&st1=, accessed 20 August 2012.

Iran in 1979, or even the anti-regime upheaval in Iran in 2009. There is nothing self-guaranteeing about any revolution. Mob rule may overthrow a dictator, but it is no guarantee of a democracy. Because powerlessness has been displaced by ownership and dignity reclaimed by the people, it does not mean that deprivations will disappear. A revolution can devour its own authors and lead to even greater tyranny, as with the reigns of terror after the French, Russian, Chinese and Iranian revolutions. Or it can lead to a republic founded in laws and ruled by democratic consent, as in America and repeated across Eastern Europe after the collapse of the Soviet Union. Against this wider Arab backdrop, significant sections of the Libyan people rose up in revolt against the 42-year-old despotic rule of Muammar Gaddafi and called on the international community for moral support but also material help.

For 350 years, since Westphalia, sovereignty shielded tyrants from external accountability for acts of domestic brutality. International interventions in Kosovo and East Timor in 1999 broke that mould and were the backdrop to Kofi Annan's search for a new norm. With Canada's help an independent international commission formulated the principle of the responsibility to protect. It is easy to forget that the United Nations was never meant to be a pacifist organisation. Its origins lie in the anti-Nazi wartime military alliance among Britain, the United States and the Soviet Union. Its primary purpose is the maintenance of international peace and security. The Security Council is the world's only duly sworn-in 'sheriff' for enforcing international law and order. To the extent that Australia would like to be the 'deputy sheriff', I think it is better to be the world's duly elected deputy sheriff on the Security Council than a self-appointed regional sheriff in the Asia-Pacific.

In the decades after 1945 the nature of armed conflict was transformed as inter-state warfare between uniformed armies gave way to irregular conflict between rival armed groups. The nature of the state, too, changed from its idealised European version. Many communist and some newly decolonised countries were internal security states, whose regimes ruled through terror. Increasingly, the principal victims of both types of violence were civilians. Advances in telecommunications brought the full horror of their plights into our living rooms. In the meantime, the goals of promoting human rights and democratic governance, protecting civilian victims of humanitarian atrocities and punishing governmental perpetrators of mass crimes became more important. Against these broader systemic and structural changes since 1945, R2P spoke eloquently to the need to change the UN's normative framework in line with the changed reality of security threats and the changing victims of armed violence, and that was indeed the thesis of my book, *From Collective Security to the Responsibility to Protect*.[3]

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3   Ramesh Thakur, *The United Nations, Peace and Security: From Collective Security to the Responsibility to Protect*, Cambridge University Press, Cambridge, 2006.

Failure to act in Rwanda in 1994 and non-UN authorised humanitarian intervention in Kosovo in 1999 triggered deeply divisive recriminations around the world for acts both of commission and omission. In the wake of that controversy, the 2001 ICISS Report—the International Commission on Intervention and State Sovereignty—argued that the essential nature of sovereignty had changed from state privileges and immunities to the responsibility of states to protect people from atrocity crimes.[4] Where the state defaulted on its solemn responsibility owing to lack of will or capacity, or because it was itself complicit in the atrocities, then the responsibility tripped upwards to the international community, but acting through the United Nations. Social division into 'in' groups and 'out' groups is a precondition of genocide, and demagogues inflaming differences between the groups are the precursor agents of the poisonous outcome when genocide breaks out. In this vacuum of responsibility for the safety of the marginalised, stigmatised and dehumanised 'out' group, R2P provides an entry point for the international community to step in and take up the moral and military slack. Pared down to its essence, the responsibility to protect is an acceptance of a duty of care by all of us who live in zones of safety towards those trapped in zones of danger. There have been tangible conceptual and political advances in R2P since our report in 2001. The unanimous endorsement of R2P by world leaders in 2005 was historic, for it spoke to the fundamental purposes of the United Nations and responded to a critical challenge of the new century.[5] Compared to the 2001 ICISS version, the 2005 tweaking added clarity, rigour and specificity, limiting the triggering events to war crimes, genocide, crimes against humanity and ethnic cleansing; thereby realigning the emerging global political norm to existing categories of international legal crimes.

Ban Ki-moon's three reports on R2P since 2009 have sustained and consolidated the new international consensus on the inherently controversial and contentious subject. Let me emphasise: the use of international force, against a state's consent, for human protection purposes will *always* be contested and contentious, always. But that is no reason to shy away from it. Civil society organisations have promoted a vigorous process of R2P non-socialisation and crystallisation. The annual debates in the General Assembly in 2009, 2010 and 2011 on Ban's three special reports have helped to forge a shared understanding of R2P to distinguish it from humanitarian intervention and to align it with building capacity to help states exercise their sovereignty more responsibly and more effectively. These debates

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4   International Commission on Intervention and State Sovereignty, *The Responsibility to Protect: Report of the International Commission on Intervention and State Sovereignty – December 2001*, International Development Research Centre, Ottawa, 2001.

5   United Nations General Assembly, A/RES/60/1, *Resolution Adopted by the General Assembly: 60/1, 2005 World Summit Outcome*, 24 October 2005, paragraphs 138 and 139, available at http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/60/1, accessed 20 August 2012.

show that the consensus on R2P is broadening, its legitimacy is strengthening and most states are now more concerned to move onto questions of implementation, not questioning the principle. Within the United Nations, the widespread initial institutional resistance to R2P has abated and been replaced by a general willingness to explore how an atrocity prevention perspective can help to inform a wide range of UN operational activities. This is so because R2P in the end strikes a balance between unilateral interference rooted in the arrogance of power and institutionalised indifference that dislocates the other from the self.

R2P will help the world to be better prepared normatively, organisationally and operationally to meet the recurrent challenge of external military intervention. To interveners, it offers the prospect of international legitimacy, reduced compliance and transaction costs, and more effective results. To potential targets of intervention, R2P offers the reassurance of a rules-based system that inhibits the powerful from intervening anywhere and everywhere. R2P is narrow, it applies only to the four atrocity crimes, but it is deep. There are no limits to what can be done in responding to these four atrocity crimes. In a matching symmetry, support for R2P has been broad but shallow. The world's comfort level is greater with action under Pillar One (building state capacity) and Pillar Two (international assistance to build state capacity) than under Pillar Three (coercive international action), with the final option being military intervention to protect at risk populations from atrocity crimes.[6] As I said, by its very nature, including unpredictability, unintended consequences and the risk to innocent lives caught in the crossfire, warfare is inherently brutal. There is nothing humanitarian about the means but, to be meaningful, the R2P spectrum of action must include military force as the option of last resort. If you take that away, R2P collapses.

Now R2P was the discourse of choice in debating how best to respond to the Libya crisis in January, February and March last year. The UN Security Council, the Human Rights Council, Ban Ki-moon and his special advisers on genocide prevention and responsibility to protect all called on Libya to respect its R2P, human rights and international humanitarian law obligations. When these appeals were ignored, on 26 February in Resolution 1970 the Security Council demanded an end to the violence in Libya which 'may amount to crimes against humanity'.[7]

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6   In a 2009 report Ban Ki-moon refined the R2P principle, outlining a three-pillar strategy for advancing the agenda: Pillar One as the protection responsibilities of the state; Pillar Two as international assistance and capacity building; and Pillar Three as timely and decisive response. See United Nations General Assembly, A/63/677, *Implementing the Responsibility to Protect: Report of the Secretary-General*, 12 January 2009, available at http://www.responsibilitytoprotect.org/files/SGRtoPEng.pdf, accessed 20 August 2012.

7   United Nations Security Council, S/RES/1970 (2011), *Resolution 1970 (2011)*, 26 February 2011, available at http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/1970(2011), accessed 20 August 2012.

It imposed sanctions. It affirmed Libya's R2P obligations and it referred Gaddafi to the International Criminal Court. When this, in turn, also failed to moderate Gaddafi's assault on his own people then, but only then, Resolution 1973 adopted on 17 March 2011 by a vote of ten in favour, zero against and five abstentions authorised the use of 'all necessary measures … to protect civilians and civilian populated areas'.[8] Now I highlight that quote because that is the germ of the controversy and I will come back to that shortly.

In the Balkans, it took near to almost the full decade to intervene with air power in Kosovo in 1999. In Libya, it took just one month to mobilise a broad coalition, secure a UN mandate to protect civilians, establish and enforce no-fly and no-drive zones, stop Gaddafi's advancing army and prevent a massacre of the innocents in Benghazi. Although Britain and France took the lead in trying to mobilise diplomatic support for some military action to help the Libyan rebels, the critical turning point was US backing. The key decision was made by President Barack Obama at a meeting with top officials on 15 March. The 'game-changer' was the juxtaposition of R2P as a powerful new galvanising norm—since given institutional form with the creation of the Atrocities Prevention Board with Samantha Power as chair[9]—plus the defection of Libyan diplomats who joined the chorus of calls from the rebels for immediate action to protect civilians, and Arab, French and British participation that provided political cover and international legitimacy. By year's end, Gaddafi had been ousted, captured and killed. Yet the jury is still out on whether NATO military action in Libya will consolidate or soften the R2P norm.

Continuing volatility, violence and human rights abuses in Libya, the desecration of allied war graves in Benghazi—these are the people that we protected and this is the side we supported—the muted response to protests and uprisings in Bahrain and Saudi Arabia where vital Western geopolitical and oil interests are directly engaged, and failures to defend the dignity and rights of Palestinians under Israeli occupation are all damaging to Western claims to be the champions and enforcers of global human rights. In addition, Terry Macalister, *The Guardian's* energy editor, believes that, 'The Libyan conflict has been a war about oil if not "for" oil'.[10] In a speech to the General Assembly last year, India's Prime Minister Manmohan Singh made a thinly-veiled attack on the expansive interpretation of Resolution 1973: 'Actions taken under the authority of the United Nations must respect the unity,

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8   United Nations Security Council, S/RES/1973 (2011), *Resolution 1973 (2011)*, 17 March 2011, available at http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/1973(2011), accessed 20 August 2012.

9   United States Institute of Peace, 'Obama Announces Formation of the Atrocities Prevention Board', 23 April 2012, see http://www.usip.org/publications/obama-announces-formation-the-atrocities-prevention-board, accessed 20 August 2012.

10   Terry Macalister, 'So, was this a war for oil?', in *The Guardian*, 2 September 2011.

territorial integrity, sovereignty and independence of individual states'.[11] Russia and China led the chorus of dismay at the United Nations appearing to take sides in the internal conflicts in Libya and Côte d'Ivoire. They may be less willing in future to permit sweeping endorsements for tough action, either by a coalition as in Libya or even by UN peacekeepers as in Côte d'Ivoire.

Paris, London and Washington—and, let me add, Ban Ki-moon—did not waver in their resolve, despite critics from the left pushing for diplomacy not war, and critics from the right calling for 'boots on the ground'. Despite the doubts, the alternative of standing idly on the sidelines yet again would have added to the shamefully long list of rejecting the collective responsibility to protect. In Libya, the West's strategic interests coincided with UN values. This does not mean that the latter was subordinated to the former. It does mean, as with Australia vis-à-vis East Timor in 1999, that there was a better prospect of sustained NATO engagement than if Western interests were not affected. And the outcome is a triumph for R2P. Let me be very clear about that. It is possible for the international community, working through the authenticated UN-centred structures and procedures of organised multilateralism, to deploy international force to neutralise the military might of a thug and intervene between him and his victims. The Libyan people's euphoria and NATO's relief over the successful military campaign is likely to temper criticisms for the manner in which NATO rode roughshod over UN authorisation to protect civilians.

The ruins of Libya's political infrastructure and parlous state of its coffers mean that the third component of R2P in our original formulation—namely, the international responsibility to rebuild and reconstruct—will come into play. The willingness, nature and duration of outside help will also help to shape the judgement of history on whether Western motivations were primarily self-interested geopolitical and commercial, or the disinterested desire to protect civilians from a murderous rampage. As with the war itself, however, the lead role will have to be assumed by the Libyans themselves, while the international community can assist without assuming ownership of the process or responsibility for the outcome. The price of this, in turn, may require us to accept and live with the political choices made by the Libyans, including the embrace of sharia (Islamic law) as a main reference point for their new legal framework. So, albeit qualified and incomplete, Libya marks a milestone on the journey to tame atrocities on their own people by tyrants.

But, inevitably, the first UN-authorised military intervention under R2P Pillar Three also showed flaws and imperfections in the machinery of implementation that we will need to address. With the capture and killing of Gaddafi, hard

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11   Manmohan Singh, 'Manmohan Slams West for Using Force to Change Regimes', in *The Times of India*, 25 September 2011, available at http://articles.timesofindia.indiatimes.com/2011-09-25/india/30200524_1_libya-sovereignty-countries, accessed 20 August 2012.

questions, unasked so as not to complicate the push for victory, came to the fore. Who are the rebels? What do they stand for? For whom do they speak? How much popular support do they command? All questions, by the way, that are extremely relevant to Syria today.

Carefully crafted both to authorise, but also to delimit the scope of intervention, Resolution 1973 specified the purpose of military action as humanitarian protection and limited the means to that call. NATO ignored its restrictions, spurned hints of a negotiated ceasefire and broke the UN arms embargo by supplying weaponry to the rebels. Human rights groups have noted that violations may have occurred by all sides during the conflict. If Resolution 1973 restrictions had been respected, the civil war and the international intervention could well have been longer, more protracted, messier and prolonged the misery for everyone concerned. So ignoring them may well have been justified on the logic of military necessity and efficiency. The US, British and French leaders noted in a joint article that although the goal of military action was 'not to remove Qaddafi by force … it is impossible to imagine a future for Libya with Qaddafi in power'.[12] That is a fair argument but the insistence, based on political and legal sophistry, of full fidelity to Resolution 1973 insults the intelligence of critics and enrages instead of placating them. The United Nations authorisation to save strangers was unilaterally transformed into tilting the balance in favour of the rebels to effect regime change. The balance of evidence suggests that this was not the initial design, contrary to the critics, but happened mid-campaign.

R2P is not and should not be a North-South issue. Many non-Western societies have a historical tradition of reciprocal rights and obligations that bind sovereigns and subjects. For example, one of India's greatest rulers, Emperor Ashoka from the third century BC, proclaimed in one of his rock edicts: 'this is my rule: government by the law, administration according to the law, gratification of my subjects under the law, and protection through the law'.[13] By contrast, the theory and practice of sovereignty is decidedly European.

The debate on how best to operationalise R2P requires a respectful conversation among proponents and sceptics over when, how and by whom to execute the international responsibility to protect. The consensus on R2P, in ICISS in 2001 and at the UN summit in 2005, resulted from a genuine dialogue within the commission, in an extensive outreach and consultation exercise undertaken by ICISS in 2001 with regional interlocutors in every continent, and successive rounds

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12 Barack Obama, David Cameron and Nicolas Sarkozy, 'Libya's Pathway to Peace', in *The New York Times*, 14 April 2011, available at http://www.nytimes.com/2011/04/15/opinion/15iht-edlibya15.html, accessed 20 August 2012.

13 Emperor Ashoka, quoted in Stanley Wolpert, *A New History of India*, Oxford University Press, New York, NY, 1977, pp. 66–67.

of intensive consultations across the UN membership in and since 2005. The global South's comfort level with R2P grew steadily as they studied the principle closely and recognised that all their legitimate concerns had been incorporated. Had R2P merely repackaged the Western humanitarian warriors' wishes and brushed aside the sensitivities of the rest, it never would have gained rapid uptake and traction culminating in unanimous endorsement in 2005. And this is why I think the leading NATO powers, instead of being disdainful of and disrespectful towards the critics of how R2P was implemented in Libya, should listen, acknowledge and accommodate legitimate concerns. Desirable in principle, this is also required as a matter of pragmatism as the world order is rebalanced militarily, economically and geopolitically, with power and influence shifting from the North to the South.

The R2P consensus underpinning Resolution 1973 was damaged by gaps in expectation, communication and accountability between those who mandated the operation and those who executed it. One important result of the gaps has been a split in the international response to the crisis in Syria. UN estimates put the number killed to between 9000 and 10 000 by now. The Arab and Western countries introduced draft Security Council Resolutions in October last year and February this year, both of which were vetoed by China and Russia, still smarting from the over-interpretation of Resolution 1973 in Libya and the abuse of their goodwill in abstaining on the resolution that they disliked; remember if they had voted no, the resolution would have been vetoed. They did not like it but they abstained and they believe that goodwill was abused. Let me emphasise that, like any great powers, Russian and Chinese actions with respect to Syria combine a mix of principled, commercial and geopolitical approaches and interests. They dislike intrusion into the internal affairs of sovereign states. They are worried about the moral hazard of interventions, in that they can encourage every wannabe rebel and secessionist group to resort to armed violence and to intensify violence as a means of provoking international intervention. They object, in principle, to the idea that the United Nations or any outsider should determine the outcome of an internal struggle for political power. They insist on a measure of balance, although not necessarily full equivalence, between those rebels who resort to armed violence and the response by states. There is overwhelming support across the world for the right of states to respond to armed challenges to their authority. There will never be support for the opposite in that. Although, certainly if you listen to many in the NGO (non-government organisation) community, you get the impression that under today's norms *anyone but* the state has the right to use violence, which is a reversal of the historical fact.

International opinion has been divided on whether or not to draw on R2P for intervening in Syria. Meanwhile, Brazil offered a paper on 'Responsibility while

Protecting,[14] which has a potential to bring in agreed parameters on the conditions that will govern the use of UN-authorised R2P operations. Its two key elements are to formulate an agreed set of criteria or guidelines to help the Security Council in the debate before an R2P military intervention is authorised, and then a monitoring or review mechanism to ensure the Security Council has an oversight role and exercises supervisory control over the operation after authorisation and during implementation. Specifically, the authorisation for the use of force must be limited in its legal, operational and temporal elements, and enhanced Security Council procedures are needed to monitor and assess the manner in which resolutions are interpreted and implemented to ensure responsibility while protecting. On the other side, as long as the rising new powers remain more concerned with consolidating their national power aspirations than developing the norms and institutions of global governance, they will remain incomplete powers, limited by their own narrow ambitions with their material grasp being longer than the normative reach. As exemplified in the Brazilian initiative, the critics should engage with R2P and seek to improve the means and manner of implementing the norm. This way, the Southern players will become joint and responsible stakeholders in the emerging new world order because value-free pragmatism is no more an answer to the challenge of reconciling realism and idealism than is opportunistic humanitarianism.

I will now conclude by bringing these thoughts together. The R2P operation in Libya was successful, but also controversial and contested. A cruel and capricious regime that had lost all domestic and international legitimacy declared war on its own people. Global political responses were shaped by universal values as well as strategic interests. The ruling class of any country must now fear the risk and threat of international economic, criminal justice and military action if they violate global standards of conduct and cross UN 'red lines' of behaviour. Such action is not guaranteed, but they cannot be confident that no action will be taken.

Like all revolutionary upheavals, the 'Arab Spring' has unleashed long-suppressed subterranean forces whose long-term impact is difficult to predict, as indeed was Amin Saikal's conclusion and his analysis. And, as he reminded us, it has reopened and sharpened several fault lines; in particular, between Sunnis and Shi'ites domestically and regionally. In this confused context, Iran supports the democratic demands of the Shi'ites in Bahrain but backs state repression of similar demands in Syria. The West arms the repressive monarchies but demands reforms in Syria and Iran, and the Arab League pivots from one crisis to another with little thought

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14   United Nations General Assembly and Security Council, A/66/551–S/2011/701, 'Responsibility while Protecting: Elements for the Development and Promotion of a Concept', 11 November 2011, available at http://www.un.int/brazil/speech/Concept-Paper-%20RwP.pdf, accessed 20 August 2012.

to consistency of principles and values. In the meantime, Islamists have gained additional footholds across the region in the wind shadows of the Arab Spring.

What the Libyan example shows, above all, is that success in an R2P intervention is no more self-guaranteeing than in any other type of external intervention. Good intentions are not a magical formula by which to shape good outcomes, particularly in foreign lands. On the contrary, there is no humanitarian crisis so grave that it cannot be made worse by an external military intervention. Although no intervention will mean grave harm in some cases, fewer interventions can do less good but also cause less harm. Therefore, the guiding model should be, first, do less harm. The lessons of Libya and Iraq it seems to me to suggest that the multiple requirement of an outside intervention would be:

- end the killings and bloodshed;
- remove the dictator, but do not trade an incumbent for a new dictator;
- fill the resulting power vacuum with a coherent, representative, legitimate and inclusive governing body;
- avoid state collapse, failure and fragmentation;
- act to ensure state capacity to provide law and order;
- assure safety and security, and deliver public services; and
- stop the country from becoming the pawn of a foreign power, whether distant or next door.

In the words of former Secretary-General Dag Hammarskjöld, the United Nations was 'not created in order to bring us to heaven, but in order to save us from hell'.[15] Failures in Africa and the Balkans in the 1990s reflected structural, political and operational deficiencies that accounted for the United Nations inability to save people from a life of hell on earth. The responsibility to protect responds to the idealised United Nations as the symbol of an imagined and constructed community of strangers when their lives need saving from systematic killing. I leave you with the following profound question: if a vegetarian is someone who eats only vegetables what is a humanitarian?

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15   Quoted in Brian Urquhart, *Hammerskjold*, Alfred A. Knopf, New York, NY, 1972, p. 48.

Panel Discussion

Panelists
- Dr Chris Clark
- Professor Amin Saikal
- Professor Ramesh Thakur

Dr Gavin Mount (UNSW@ADFA – Moderator): Before I open the floor to questions, I thought I might ask our last two speakers to reflect on some of the broader questions about how they would characterise international order more generally. We heard Professor Saikal talk about using the notion of balance of power within the region but also the role of external powers, and I heard a strong sense of the role of great powers—a traditional notion, if you like, of international relations which somewhat contrasted with what Inis Claude characterised the 20th century; its preoccupation was collective security. Maybe it's evolving more towards responsibility to protect. Surely, great powers have a role in guaranteeing this, but it's also sharing the ideas of international order more broadly. I wonder if you could comment on where you see international order, as we move into the 21st century. Do we have a way of characterising it? Do we have a slogan?

Professor Saikal: I'm not really sure that we have a slogan for it. To me, it appears that the international order at present is incredibly incoherent and we really don't have the solid pieces that we can put together that could allow us to claim that there actually is an international order. I think with the challenges which are going on in the relationship between the United States and China, and with the challenges arising from Russia becoming more assertive in its foreign policy disposition, it is neither a one-superpower world nor necessarily a bipolar world. We are seeing more and more the diffusion of power and whatever order that may be. I think the regions are going to have their own developments and their own orders, but at the same time you've got multiple outside powers continuously conscious of what's going on in the regions so that they can preserve their own interests. I don't expect, for example, in the case of the Middle East that there's going to be less major power intervention. I think that major power intervention will continue, whether it's on the part of the United States and its competitors in the international arena or, for that matter, even between the United States and some of its allies. But that does not necessarily mean that there are not going to be internal forces—regional forces—which would seek to really limit the outside interventionist behaviour as much as possible. As I pointed out in my talk, I think the rise of the reformist Islamist groups will definitely try to put certain limitations on what the outside powers can really do in relation to the Middle East. But, again, that's not really going to stop the outside powers in terms of remaining interventionist to preserve

their own interests. That's why I think that ultimately there has to be some sort of a balance of power within the region and between the forces which compete in the region and over the region. Now I can just see some sort of a balance of power emerging, for example, in the Middle East between Iran and Saudi Arabia. This is not something that the Saudi Arabia ever really wanted. Saudi Arabia could never really have anticipated playing the role that it's playing at the moment but I think the circumstances have really created a necessity for Saudi Arabia to step up to the challenge, simply because the leadership of the Arab world once was contested between Baghdad and Cairo but that's no longer the case—neither of these capitals are powerful enough now, neither of those countries are powerful enough to exert themselves. But at the same time we also know that there are major powers behind both of these protagonists. You've got the United States supporting Saudi Arabia and its partners, and you've got Russia—and to some extent China—really very much conscious of not wanting to allow a major upset in the *status quo* and therefore they are supporting Iran and its associates across the region.

Dr Mount: Indeed, India too on the nuclear energy issue.

Professor Saikal: Absolutely.

Dr Mount: Some of these are issue-based. Ramesh, would you care to add this?

Professor Thakur: How much time do we have? I wouldn't use the word 'incoherent'. I think it's inchoate and emergent, if you like transitional. We went from Pax Britannica to Pax Americana. Pax Britannica, the era when the sun never set on the British Empire—for which, by the way, the Indian explanation was that the sun never set on the British Empire because even God would not even trust an Englishman in the dark! We went from that to Pax Americana and clearly that era is going, the unipolar moment has passed, but are we in a world of G-2 (United States and China), a G-20, a G-4 (United States, China, European Union and India) or G-Zero, which is probably the leading contender at the moment.

In terms of power shifts, what we are seeing is an interesting, rare and perhaps unique historical phenomenon. At the same time as globally there's a readjustment between the United States and China—with the US as a relative declinist, and I must emphasise *relative*, and a rising both relative an absolute power in China— the same phenomenon is being played out across Asia between China and India. And China demands and expects certain things from the United States, which it seems less willing to display in its own relations with India. These two simultaneous things will pose interesting challenges as well. Then at the next level you've got the Brazils and the Mexicos, and then you've got South Africa.

But what is important I think in all this is a point I made in my talk which I want to come back to and that is that I think we are going to see a mix of power and vision and values. While the established *status quo* powers will have to make concessions on the power side—and their reluctance was most recently shown up

in the choice of the chief for the World Bank—on the rising side, there will have to be a much greater and open acceptance of the responsibilities on the vision and value side. In other words, I think the Chinas and Indias will have to move from being perpetual norm-spoilers into learning the skills and accepting the burdens of becoming norm-entrepreneurs, so that they become norm-setters and norm-enforcers, alongside not being ready to be simply norm-takers. And we haven't seen that much evidence for that in the recent past.

There is one other thing that I'd like to put onto the table in terms of these shifts and transitions that we are witnessing and it is very important and directly relevant to us—much more so in the West than in the rest of the world—and that is a crisis of confidence in democracy and governance in general. The alienation of people from their own governments, a refusal to be ruled by the professional credit rating agencies and the bankers and financiers, the rebellion against the growing inequalities within and among nations, all of which have created a great crisis of authority and legitimacy, which we certainly see expressed in our own country as well. I don't think we have adequately grasped the gravity of that crisis and that is something that worries me quite a lot also, in terms of looking to historical parallels as eras and epochs change.

Dr Mount: Chris [Clark] I wonder if you would reflect on the idea that diplomacy is more than 'cucumber sandwiches'. In fact, it might be very, very important for the three criteria that you mentioned: capability, sustainability and escalation. Indeed, it may create the language which shapes what is possible and permissible in the operational environment. Given what we've just heard here—what is described by some as an age of non-polarity, by others as an age of entropy—how do you think this is going to shape the application, in an operational sense, of notions like coercion and coercive defence?

Dr Clark: I think something that is quite striking, when you look at the use of coercive diplomacy, is that it had very little to do with diplomacy and negotiation in many instances. That was really why I ended up looking at what had been some of the distinguishing features, such as use of capability—I think I actually said credibility, credibility of the threat. I was actually more struck with Professor Thakur's points about the right to protect and how that stems in relation to coercive diplomacy with your vision statements and objectives. I think I heard you say, correct me if I'm wrong, that what the UN should be seeking to do in cases where you're dealing with a dictator is remove the dictator, avoid replacing him with another dictator, replace with an inclusive regime, and avoid the failed state. I'm quite sure that was what people thought they were doing in places like Iraq and Afghanistan. Perhaps we're being too idealistic here. Perhaps some of the objectives you were talking about are not realistic. I think it also relates back to Professor Saikal's description that we're living in an incoherent world order. I wonder, hasn't it always been thus? I think we project onto ourselves that there's something particularly unique and new in the circumstances we face at the moment, and I

think one thing I was trying to do in my presentation was simply point out that it's always thus. We've got a long history of having to deal with difficult situations. What is perhaps new is that we've decided that it is time to front up and protect people in peril from their own government. That, I think, is certainly something for which there hasn't been a lot of precedent in the past.

Air Marshal Ray Funnell (RAAF Retd):   I greatly enjoyed all the presentations this morning and I thank the three presenters very much indeed. I also was very much taken with Ramesh Thakur and his explanation of the background to and development of R2P. Ramesh's personal contribution to that whole development has been quite extraordinary and needs to be more widely acknowledged, particularly here in Australia. I just wanted you to reflect on one thing Ramesh and this is the use of R2P. Could it be, and I'd like you to talk on this, that it was used in Libya less because of an intellectual and moral alignment with its precepts, but rather because it was useful for practical and political reasons and, especially in the case of the US, to avoid the operational and political experiences that they'd suffered in Iraq and Afghanistan; this was seen as something to be used rather than something to which they were fully committed in an intellectual and moral sense.

Professor Thakur: Thanks Ray. That's the Air Chief who started this tradition of Air Chief's conferences on air power. I'll answer his question but before that I must tell you that after the Kosovo war in '99 I was back in Canberra for a visit and having a lunch or dinner or a drink with Ray and I said to him, 'So tell me Air Marshal was this the first war that was won by air power?' And he answered, 'You know Ramesh, I have a lot of respect for you but, with respect, that's a very stupid question'. So I got him to give me an answer to that stupid question. I think there's a simple way of answering the question. I mean, we could have a long one and we'll get a chance to have a longer discussion later on anyway, but the simple way to answer that is to go back to that 15 March debate by Obama with his advisers that I talked about. Who were the people who were opposed to the US getting involved? They were the people who had taken up the position you are saying as an alternative narrative. Robert Gates [Secretary of Defense] was opposed, Tom Donilon [National Security Advisor] was opposed, and the Chairman of the Joint Chiefs of Staff was opposed. All the heavyweights who normally you would associate with that line of argument said, 'No, we don't want to get involved'. And who were the ones that said we should get involved? Samantha Power, Susan Rice, Hillary Clinton—Hillary Clinton speaking into that conference from a visit in the region. And from what I understand from talking to people and reading the press, it's her visit to the region which exposed her to the depth and intensity of the demands to do something and do something now. So once you look at that coalition, I think it gives a lie both to these arguments that it was geopolitical and commercial interests and the usual sorts of things, and substantiates my argument that it was this mix of values-laden and strategic interests coinciding that was

responsible for this. And it was a closely run thing and that debate has continued and is bound to continue in the future.

So, no, I don't think it was just a useful thing; I think it was the power of the norm. And it was the power of the norm that made it impossible for Russia and China and India and Brazil to vote no in that resolution. They did not want to bear the judgement of history if action was stymied and a massacre took place. It's all very well now to go back and revise history and say, 'Well we don't know that he would have done it'. Well you know that Gaddafi and his son had form. When they issued that threat, we had every reason to believe in the credibility of the threat and that action was very imminent. When they said, 'We will hunt them down like cockroaches, alley by alley and house by house', we had good reason to believe that they were not just capable of that but that they would carry it out. And we stopped that. So, on balance, I think it was done for the right reasons and the outcome was good. There are still problems, as I've indicated, but that's how we make progress. We sort of muddle our way through sometimes, argue our way through, but the trendline, as we've argued over the years, over the last century has been essentially a very positive one in all these things and the international community, as a community, has been at the centre of the trendline.

Professor Saikal: It's very interesting that the power of norms has been applied to the case of Libya, but cannot be really applied to Syria. I think there's a lot of geostrategic reasons why R2P was applied to Libya but it cannot be to Syria because, first of all, it was easier to operate against Libya and it's a highly complex situation in relation to Syria, it's not easy. Besides which, now with the Chinese and the Russians aligned, their expectation was that you were only going to protect the civilians but not to change the regime in Libya, whereas the objective as it actually turned out was really to change the regime and that's what was really done. And that's why the Chinese and the Russians are very hesitant to allow or provide a very free menu for the United States and its allies do the same in relation to Syria.

Flight Lieutenant Chelsea Bulfield (RAAF Logistics Officer):   I would note that I did study at the UNU [United Nations University] Institute for Sustainability and Peace in Tokyo last year. My question is, in what way into the future does the panel see military force being articulated where there is not sufficient grounds to justify R2P as the premise for legal international action? And are we likely to face increasingly the question of legality verses legitimacy where there is an overwhelming need to protect against threats to wider elements of human security or state sovereignty, which fall outside the strict scope of the four atrocity crimes?

Professor Thakur: I think it's a question that's going to be increasingly relevant in a number of situations. I'd add one more complicating thing. What do we do if the Security Council is paralysed and deadlocked as well? In all of those, I think we need to be clear on the parameters and other things. You have traditional national security, by yourself or in alliance with others—us against them in response to

armed attack. You've got collective security—all against one. You've got traditional classical peacekeeping—us between erstwhile belligerents, who are now observing the ceasefire agreement, and us between perpetrators and victims; that's where the responsibility to protect comes in. There have been efforts to broaden it, most notably for example in response to Cyclone Nargis in Burma when Bernard Kouchner [French Foreign Minister] said that R2P was applicable. We had actually in our commission report accepted humanitarian emergencies as a triggering cause, but that consensus did not last in 2005. The most and the only authoritative international political document is the *2005 World Summit Outcome* document. You will find immense resistance across the developing world, and from China and Russia, to any effort to renegotiate or reinterpret that—they will just say, 'No'. So I think we have to stick to those because that's the limit of the consensus. Any action beyond that, that is not self-defence and not authorised by the United Nations, will face growing costs (military and political) and I will need a lot of convincing that the outcome will be worth that extra cost.

So I think we are going to live in a complicated world where all of these issues are going to have to be decided on a case-by-case basis with respect to the contingencies. And in response, I think it will be that mix and an appropriate balance between strategic or security or commercial interests on the one hand and values and visions on the other, and the calculation of what is going to be the cost to us if we take action on our own knowing that the rest of the world will not support that. We see the price of that in Iraq when we took that decision. You know it's easier to go and wage war and get military victory in the short term but that victory is pointless if it cannot be converted into an enduring peace and stable order after that. And those costs are very high when the international community disagrees fundamentally from that, and there is no substitute for the voice and vote of the international community to the United Nations.

Professor Saikal: Referring to your central point about legality verses legitimacy; both of those are now seriously challenged by the United States drone attacks from across the border into Pakistan. Many people would consider the drone attacks illegal and also they are in violation of Pakistan's sovereignty. But that's when the national interests come into play and that's where national imperatives come into play. The United States feels that it has to deal with this issue. Therefore, from America's point of view it is both legal and legitimate to carry out these cross-border attacks into Pakistan but from the Pakistani's point of view it's entirely illegal and a violation of the sovereignty of the state. So how do you really reconcile this? That is going to be the big issue in the medium to long run in world politics.

Dr Mount: Although there are other people with questions, I'm going to have to stop there and give Chris Clark the last chance to make any general comments before concluding the session.

Dr Clark: Could I just address that last question, in fact, because I think it's relevant to this conference that we're talking coercive diplomacy. I think to an extent the responsibility to protect is a subset—almost a distraction in one respect, although it certainly is relevant particularly to the 2011 Libya example—but I think what we can see, while the need to build a consensus may be essential in situations where we are looking at a responsibility to protect, I don't think that will be the only situation in which coercive diplomacy will become relevant. I think, lacking consensus, the big powers will still act when there is a national imperative that they feel justifies displaying and if necessary using military force to influence an action on behalf of another state player that they do not like.

Dr Mount: So, as you've mentioned earlier, contradiction is the norm and military may like to have clear plans but diplomats sometimes operate in a strategic ambiguity; that is, they intentionally create these problems. Think of perhaps the United States and Australian strategy towards Taiwan, it's neither one way nor the other and this might be part of the tension that you've already introduced and that has been on display here. I'm sure it will continue when we have our further speakers.

Coercive Diplomacy: Scope, Limits and Requisites

Professor Bruce W. Jentleson

When you talk about coercive diplomacy, the very sound of it is alluring. The first word conveys toughness, that this is a strategy that is not just about talk-shops; the second that it is not just relying on military force and other coercion, that it also involves negotiation.

But while coercive diplomacy can be an effective strategy, it often has not been. And it has demanding requisites for success.

This paper and conference presentation are intended to inform consideration of coercive diplomacy going forward, based both on relevant scholarly literature and recent policy experience.[1] As with any foreign policy strategy, it is important to have a sense for the scope and limits of likely effectiveness, and the key requisites for maximising prospects for success. While each case has its distinctiveness, none are strictly unique. A strategic framework provides a working template within which case-specific strategies are best developed.

The first section of the paper briefly reviews the conceptualisation and analysis of coercive diplomacy in the scholarly literature. In this context, it can be seen why the Libya 2011 intervention was not a case of coercive diplomacy, and is more usefully assessed for its degree of success and lessons learned as a case of limited war.

Section two examines two major recent cases that were coercive diplomacy: one that exemplifies success (the 2003 weapons of mass destruction and terrorism deal with Libya), the other in which coercive diplomacy failed and war had to be turned to (the 1990 Iraqi invasion of Kuwait).

Section three draws out lessons and implications as the basis for a framework of policy guidelines for coercive diplomacy going forward. During the conference

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1   This paper draws on prior research and publications as well as experience while serving in the U.S. State Department in the Obama and Clinton administrations. Relevant articles include: Bruce W. Jentleson and Christopher A. Whytock, 'Who "Won" Libya? The Force-Diplomacy Debate and Its Implications for Theory and Policy', in *International Security*, vol. 30, no. 3, Winter 2005/06; and Bruce W. Jentleson, 'Coercive Diplomacy: Scope and Limits, Theory and Policy', in Victor Mauer and Myriam Dunn Cavelty (eds), *The Routledge Handbook of Security Studies*, Routledge, London, 2009.

discussion we can consider their application to major cases on the current policy agenda such as Iran, Syria and North Korea.

What is Coercive Diplomacy?

'The proposition that force and threats of force are at times a necessary instrument of diplomacy … is part of the conventional wisdom of statecraft.' History does show that efforts to deal with international conflicts 'solely by means of rational persuasion and peaceful diplomacy do not always succeed'. Yet 'one can also find in history many cases in which threats of force or the actual use of force were often not only ineffective but seriously aggravated disputes'.[2]

Choosing between and/or balancing force and diplomacy is, as this classic historical observation conveys, one of the most challenging policy dilemmas. Which preposition belongs between 'force' and 'diplomacy'? Is it 'or'—force or diplomacy—such that they are largely their own distinct choices, pursue diplomacy or use force? Is it, at least in some instances, 'and'—force and diplomacy—striking a balance between them?

Coercive diplomacy, as reflected in the very terminology, is about the 'and' case. The underlying strategic logic stresses simultaneity and synergy between the coercive and negotiating elements more so than a sequential approach. Taking the overall force-diplomacy relationship as a continuum, coercive diplomacy falls along the middle. On the one end is diplomacy in the classical sense, as defined by Sir Harold Nicolson, as 'the management of international relations by negotiation'.[3] At the other end is war. While acknowledging the Clausewitzian definition of war as 'politics by other means', those other means are principally military and not just confined to limited uses of military force. War is, as the Nobelist Thomas Schelling puts it, the use of 'brute force' to 'take what you want'.[4] Negotiations are not necessarily inconsistent with brute force, but to the extent they are present they are a result of, rather than an alternative to or accompaniment of, the use of military force. Scholars who study it as well as policymakers who practice it seek to determine how best to strike the balance between coercion, including the threat or use of limited military force, and diplomacy.

Definition

The core definition of coercive diplomacy, drawn principally from the work of Alexander George, the foremost scholar in the field, is as *a strategy geared to pressuring an opponent to change policy that emphasizes diplomacy but also*

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2   Paul Lauren, Gordon Craig and Alexander George, *Force and Statecraft: Diplomatic Challenges of Our Time*, 4th edition, Oxford University Press, New York, NY, 2007.

3   Sir Harold Nicolson, *Diplomacy*, Oxford University Press, London, 1980 [1939], p. 4.

4   Thomas C. Schelling, *Arms and Influence*, Yale University Press, New Haven, CT, 1966, p. 2.

entails the threat and/or limited use of military force or other forms of coercion (e.g., economic sanctions). It seeks to '*persuade* an opponent to cease his aggression' or make other policy change 'rather than bludgeon him into stopping'.[5] Breaking it down, there are three principal elements:

(1)   *Limited objectives:* Coercive diplomacy is a strategy for policy change, not regime change or conquest.

(2)   *Coercive but limited means:* Again going back to George, coercive diplomacy is 'forceful persuasion'. It is coercive, not just the diplomacy of démarches, but as part of a strategy that 'seeks to *persuade* an opponent … rather than bludgeon him into stopping'.[6] It seeks to influence but not deny choice by the target. This can include the use of limited military force, particularly air power, as well as economic sanctions and other coercive measures.

(3)   *Negotiations:* The coercive means are applied within the context of simultaneous diplomatic processes. Incentives and inducements may be part of this but in their own way also of limited scope. 'A strategy does not qualify as coercive diplomacy', as the Danish scholar Peter Jakobsen sets the parameter, 'if the carrot employed is greater than the stick'.[7]

Coercive diplomacy thus is more than deterrence in not just seeking to dissuade some future aggressive action but undo actions already taken, yet less than compellence in doing this through forceful persuasion but not bludgeoning.

Success Rate
One of the first books on the topic was titled *The Limits of Coercive Diplomacy*; of the seven cases studies, all of which principally involved US policy, only two were deemed successful (28 per cent success rate), two others came out ambiguous and three were unsuccessful.[8] A study of 16 cases during the 1990s under the auspices of the United States Institute of Peace (USIP), also all of which were principally

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5   Alexander L. George, *Forceful Persuasion: Coercive Diplomacy as an Alternative to War*, United States Institute of Peace Press, Washington, DC, 1991, p. 5. Also Alexander L. George and William E. Simons (eds), *The Limits of Coercive Diplomacy*, Westview Press, Boulder, CO, 1994, p. 10.

6   George and Simons, *The Limits of Coercive Diplomacy*, p. 10.

7   Peter Viggo Jakobsen, 'The Strategy of Coercive Diplomacy: Refining Existing Theory to Post-Cold War Realities', in Lawrence Freedman (ed.), *Strategic Coercion: Concepts and Cases*, Oxford University Press, New York, NY, 1998, p. 79.

8   The two successes were the 1960–61 Laos crisis and the 1962 Cuban missile crisis; the failures were pre-Pearl Harbor, the 1965 US bombing of North Vietnam, and 1990–91 Iraq-Kuwait; ambiguous ones were the 1985–86 US bombing of Libya and the 1980s US support of the Contras against the Sandinista Government in Nicaragua.

involving US policy, came up with a 25 per cent success rate.[9] In his study of a set of largely different cases and not just US policy, the British scholar Lawrence Freedman did not calculate a success rate but did conclude that coercive diplomacy 'is not an easy option'.[10]

There is no definitive answer to what an acceptable success rate is. Literature on economic sanctions comes up with about a 30 per cent success rate, although some argue it is much lower.[11] A study of extended deterrence in the 1900 to 1980 period gave that strategy a 57 per cent success rate.[12] A more useful question is what are the requisites for maximising the prospects of success.

Requisites for Successful Coercive Diplomacy

Two sets of factors, one involving the coercer state(s) strategy and the other the target state's defence, are key to whether coercive diplomacy succeeds or fails.

(1)   **Coercer State Strategy.** In broad terms a coercer state strategy is most likely to succeed if the costs of noncompliance it can impose on and the benefits of compliance it can offer to the target state are greater than the benefits of noncompliance and costs of compliance. Whether or not a particular coercive diplomacy strategy strikes this balance depends on its meeting three key criteria: proportionality, reciprocity and coercive credibility.

(a)   *Proportionality* refers to the relationship within the coercer's strategy between the scope and nature of the objectives being pursued and the instruments being used in their pursuit. Limited instruments have proportionality with limited objectives such as policy change on matters that are important to a target but not vital interests or major commitments. But when the objective is changing a policy that the target considers a major one, or even more so if the objective is not just policy change but regime change, there is ends-means disproportionality. More expansive objectives manifest 'asymmetry of motivation', and how 'the strength of the opponent's motivation not to

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9   Robert J. Art and Patrick M. Cronin (eds), *The United States and Coercive Diplomacy*, United States Institute of Peace Press, Washington, DC, 2003, p. 405; the successes were Haiti 1994 and Bosnia 1995; failures were Somalia 1992–94, North Korea 1994, Iraq 1990–98, and various terrorism ones (1993, 1998, 2001); the 1995–96 Taiwan Straits confrontation with China was deemed ambiguous.

10   Freedman , *Strategic Coercion*, p. 17.

11   Gary Hufbauer, Jeffrey Schott and Kimberly Ann Elliott, *Economic Sanctions Reconsidered*, Peterson Institute for International Economics, Washington, DC, 2008; Robert Pape, 'Why Economic Sanctions Do Not Work', in *International Security*, vol. 22, no. 2, Fall 1997.

12   Study by Paul Huth and Bruce Russett, cited in Art and Cronin, *The United States and Coercive Diplomacy*, p. 404.

comply is highly dependent on what is demanded of him.'[13] While not going so far as to posit a strict linear relationship between more limited objectives and more likely success, the line between policy change and regime change has been an especially crucial proportionality threshold.

(b)   *Reciprocity* involves an explicit or at least mutually tacit understanding of linkage between the coercer's carrots and the target's concessions. Given that coercive diplomacy is a strategy for influencing but not denying the target's choices, there have to be terms of exchange based on a shared belief that if you do A, I will do B. Art and Cronin give particular emphasis to the utility of positive inducements.[14] This linkage may be incremental, as in conceptions of conditional reciprocity and 'tit-for-tat' strategy.[15] It does not have to be, though, so long as the target does not think it can get the benefits without having to reciprocate. On the other hand, if the target is unsure if the coercer state will reciprocate, it may question whether the costs of its concessions are worth the return. The balance lies in neither offering too little too late or for too much in return, nor offering too much too soon or for too little in return.

(c)   *Coercive credibility* requires that, in addition to calculations about costs and benefits of cooperation, the coercer state convincingly conveys to the target state that noncooperation has consequences. The combination of the intimidation that results from coercive credibility and the reassurance cultivated through reciprocity creates a complementarity that can make for a force-diplomacy balance lacking in either alone. Threats, actual uses of air power and other military force, and other coercive instruments (e.g., economic sanctions) must be sufficiently credible to raise the target's perceived costs of noncompliance. A superior military force or economic position, however, is not enough. The United States was the coercing state in all of the cases examined in the Art-Cronin and George-Simons case studies (in some cases unilaterally, in others as a coalition leader, but always in a principal role), all against targets less militarily powerful, yet US coercive diplomacy in these cases failed more often than it succeeded. This is a key point: the 'possession of military superiority

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13   George and Simons, *Limits of Coercive Diplomacy*, pp. 281–282.

14   Art and Cronin, *The United States and Coercive Diplomacy*, pp. 388–389; see also David A. Baldwin, 'The Power of Positive Sanctions', in *World Politics*, vol. 24, no. 1, October 1971.

15   Alexander L. George, *Bridging the Gap: Theory and Practice in Foreign Policy*, United States Institute of Peace, Washington, DC, 1993, pp. 50–57; and Robert Axelrod, *The Evolution of Cooperation*, Basic Books, New York, NY, 1984.

over the target does not guarantee success at coercive diplomacy'.[16]

All three elements of a balanced coercive diplomacy strategy are more likely to be achieved if other major international actors are supportive and if opposition within the coercing state's domestic politics is limited. Thus, not only substantive strategy but also the domestic and international contexts are important.

(2)   ***Target State Defence***. The second set of factors involves the target state's capacity to defend itself against coercive diplomacy. This is in part a military question as with air defences against limited bombing. But it is more fundamentally a political and economic question.

While regime type affects self-defence capacity and strategies, it is not determinative. The George-Simons and Art-Cronin case studies almost all involve non-democratic target states, yet they show successes as well as failures. More useful is the generic proposition of regime self-perpetuation and seeing compliance or noncompliance as a cost-benefit calculation not ideological. Leaders want to stay in power, whether for the allotted terms as in democracies or on the more open-ended basis possible in non-democracies. Whether this self-perpetuation can be sustained in the face of coercive diplomacy depends on whether internal political support can be sustained without compliance, or even may be served by noncompliance. Even when costs are to be borne, an external threat often can enhance the domestic legitimacy of the target regime, providing a rationale for domestic repression or resulting in what the Norwegian scholar Johan Galtung refers to as a politically integrative effect.[17] This also entails an economic calculation of the costs that military force, sanctions, and other coercive instruments can impose, and the benefits that trade and other economic incentives may carry.

This is where elites and other key domestic political and societal actors come into play. Even dictatorships usually cannot fully insulate themselves from elites within their own governments and societies. To the extent that elite interests are threatened by compliance with the coercing state's demands, they will act as 'circuit breakers' by blocking the external pressures on the regime. To the extent that their interests are better served by the policy concessions being demanded,

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16   Art and Cronin, *The United States and Coercive Diplomacy*, p. 402; see also Elaine M. Holoboff, 'Bad Boy or Good Business? Russia's Use of Oil as a Mechanism of Coercive Diplomacy', in Freedman, *Strategic Coercion*, pp. 179–211.

17   This dynamic was stressed by Johan Galtung in his classic formulation assailing the 'naïve theory of economic warfare' that 'does not take into account the possibility that value deprivation may initially lead to political integration and only later—perhaps much later, or even never—to political disintegration'. Johan Galtung, 'On the Effects of International Economic Sanctions: With Examples from the Case of Rhodesia', in *World Politics*, vol. 19, no. 3, April 1967, p. 389.

they will become 'transmission belts', carrying forward the coercive pressure on the regime to comply.[18]

In sum, coercive diplomacy success depends on:

(1)   how effectively the coercer's strategy combines credible force and deft diplomacy consistent with the proportionality, reciprocity, and coercive credibility criteria, and

(2)   factors within the target's domestic politics and economy that affect whether the regime leadership's self-perpetuation is better served by cooperation or confrontation, and whether key groups act as circuit breakers or transmission belts.

Libya 2011: Limited War, not Coercive Diplomacy

With this definitional framework, one can see why the Libya 2011 intervention was not a case of coercive diplomacy.

The objectives were not limited. Even though civilian protection was the initial stated objective, in US policy as well as United Nations Security Council Resolution (UNSCR) 1973, there is some doubt as to whether actual strategy ever really was limited to this. Even if one accepts that it initially was, the objective did become regime change.

While this was not all-out war, it was limited war not just signal-sending bombing raids or the like. UNSCR 1973 did include the 'all necessary measures' language, which has a history in UN Security Council resolutions of signalling authorisation of a broad scope of military measures. It was used, for example, in UNSCR 678 (November 1990) to counter the Iraqi invasion of Kuwait. The one restriction included in UNSCR 1973 was on 'foreign occupation', meaning no ground troops. Others could have been included. They were not.

There was little negotiation. Gaddaf made it clear that he was not interested in negotiating. Efforts to reach out to his son Saif, until then seen by some as more moderate, were rebuffed. This was about coercion not diplomacy. Libya 2011 is

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18   The 'transmission belts' construct is from Bruce W. Jentleson, 'Economic Sanctions and Post-Cold War Conflicts: Challenges for Theory and Policy', in Paul C. Stern and Daniel Druckman, *International Conflict Resolution after the Cold War* , National Academy Press, Washington, DC, 2000, pp. 135–136: 'The key element is not just the formal domestic political structure but … the permeability of the regime as indicated by the degree of independent activity of domestic actors that can act as "transmission belts," carrying the economic impact of the sanctions into the target's core political structures'. Jonathan Kirshner offers a similar formulation stressing the importance of identifying not only central government actors, but also 'the core groups whose political support allows the regime to remain in power'. Jonathan Kirshner, 'The Microfoundations of Economic Sanctions', in *Security Studies*, vol. 6, no. 3, Spring 1997, pp. 42 and 45.

a case with important implications, as for debates about the 'responsibility to protect' (R2P),[19] but its only relevance to coercive diplomacy is an example of the limits of this particular strategy.

Key Cases

Libya 2003: Coercive Diplomacy Success

On 19 December 2003, in an announcement that caught most of the world by surprise, Muammar Gaddafi agreed to full disarmament of his weapons of mass destruction (WMD) programs. In rapid succession, Libya deposited its instrument of accession to the Chemical Weapons Convention on 6 January 2004, and became the 159th party to the treaty 30 days later. On 14 January Libya ratified the Comprehensive Test Ban Treaty (CTBT). On March 10 it signed the Additional Protocol to the NPT, broadening the International Atomic Energy Agency's (IAEA) inspection authority.

Major progress also was made on terrorism. Libya expelled the Abu Nidal organisation in 1999, broke ties with other radical Palestinian groups, closed down training camps, and extradited suspected terrorists to Egypt, Jordan, and Yemen.[20] Most significantly, the Pan Am 103 Lockerbie case, in which Libyan operatives planted a bomb on a December 1989 flight from Scotland to the United States carrying over 200 passengers including many American students, was settled through a series of steps starting in 1998 and culminating in the August 2003 $2.7 billion settlement with the victims' families.

Based on the timing of the 19 December agreement, six days after the capture of Saddam Hussein, the Bush administration claimed that the Gaddafi regime's decisions were products of US military force. 'Libya understood that America and others will enforce doctrine', was how President George W. Bush put it. Libya's concessions on WMD were 'one of the great by-products … of what we did in

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19 This is an area in which Australians have been playing leadership roles. Former Foreign Minister Gareth Evans has been a global leader in developing and building support for R2P. Griffith University Professor Alex Bellamy has been a prominent scholar in the field. Within the US policy arena, I currently am serving on the Responsibility to Protect Working Group, co-chaired by former Secretary of State Madeleine Albright and co-sponsored by the US Institute of Peace and the US Holocaust Memorial Museum.

20 Ray Takeyh, 'The Rogue Who Came in From the Cold', in *Foreign Affairs*, vol. 80, no. 3, May/June 2001, p. 68.

Iraq and Afghanistan', claimed Vice President Dick Cheney.[21] As with many strong correlations, though, causality is more complicated. In one sense, the Iraq war, by overextending the US military and generating intense international opposition, could have been interpreted by Gaddafi as reducing any threat the United States could have posed to his regime. It is far from clear that Gaddafi believed that, after Hussein, he was next. Still, as one key US official stressed, the use of force in Iraq (and Afghanistan) had a 'demonstration effect' that could not be dismissed. British scholar Adam Roberts makes a similar point that 'it is possible seeing a fellow Arab leader unceremoniously deposed may have helped to concentrate Qaddafi's mind'.[22] Thus, US credibility on the use of force was a factor but much more in terms of its standing capacity than because of the Iraq invasion.

Force was not the only factor, though, nor the most important one. Among those who gave more credit to the overall coercive diplomacy strategy were key Clinton officials such as Assistant Secretary of State Martin Indyk, who led the 1999–2000 secret talks and contended that 'Libyan disarmament did not require a war with Iraq'; Bush administration officials such as Deputy Secretary of State Richard Armitage, for whom Saddam's capture 'didn't have anything to do' with Libya's concessions; and British Prime Minister Tony Blair, who stressed the diplomacy side, saying of the Libya deal, 'It shows that problems of proliferation can, with goodwill, be tackled through discussion and engagement, to be followed up by the responsible international agencies. It demonstrates that countries can abandon programmes voluntarily and peacefully'.[23]

Fuller analysis shows how all the elements for coercive diplomacy success came together.

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21   Bush made this statement in the first presidential debate with John Kerry, and Cheney made his statement in the vice-presidential debate with John Edwards. David Ignatius, 'A Gaddafi Cover-Up', in *Washington Post*, 26 October 2004, p. A25. See also Andrew Gumbel, 'Libya Weapons Deal: U.S. Neo-Conservatives Jubilant over WMD Agreement', in *The Independent* (UK), 22 December 2003; and Thomas Donnelly and Vance Serchuk, 'Beware the "Libyan Model"', American Enterprise Institute for Public Policy Research, March 2004, available at http://www.aei.org/print/beware-the-libyan-model, accessed 25 June 2012.

22   Adam Roberts, 'The "War on Terror" in Historical Perspective', in *Survival*, vol. 47, no. 2, Summer 2005, p. 119.

23   Martin S. Indyk, 'The Iraq War Did Not Force Gaddafi's Hand', in *Financial Times* (London), 9 March 2004; Martin S. Indyk, 'Was Kadafi Scared Straight? The Record Says No', in *Los Angeles Times*, 28 March 2004; Richard Armitage, 'State's Armitage Attributes Positive Developments to Steadfast Policies', interview with Juan Williams, National Public Radio, 23 December 2003, http://www.npr.org/templates/story/story.php?storyId=1568912, accessed 25 June 2012; Flynt Leverett, 'Why Libya Gave Up on the Bomb', in *New York Times*, 23 January 2004; and Tony Blair, statement on Libya, 19 December 2003, http://news.bbc.co.uk/1/hi/uk_politics/3336073.stm, accessed 25 June 2012. See also Joseph Cirincione, 'The World Just Got Safer: Give Diplomacy the Credit', in *Washington Post*, 11 January 2004.

First, as to coercive credibility, two non-military factors also proved influential. Sanctions were one. The multilateralisation of sanctions going back to UN Security Council resolutions in 1992 and 1993, the first time terrorism was the basis for UN sanctions, provided greater legitimacy and greater economic impact, thus strengthening the United States' coercive position. The other was the intelligence capacity demonstrated in the October 2003 interdiction in the Italian port of Taranto of the BBC *China*, a German-owned ship bound for Libya carrying centrifuge technology purchased from the Khan network.[24] As a British official noted, once the shipment was discovered, 'they [the Libyans] saw how much we knew about what they were doing.'[25]

Second, in keeping to policy change and not regime change, proportionality between ends and means was maintained. The pattern is quite striking of Libya seeking reassurances throughout negotiations, initiated in the mid-1990s and kept secret throughout, that the terms were policy change not regime change. They did so in the discussions leading to the Lockerbie settlement; in the 1998–99 deal for surrender of the two Libyan suspects and assurances through UN Secretary-General Kofi Annan that the trial 'will not be used to undermine the Libyan regime'; in a number of reassurances given in the secret talks first by Clinton officials and then by Bush ones; in US and British assurances in March and August 2003 on the final Lockerbie deal that the official acceptance of civil responsibility would not be used as grounds for legal action against the Libyan Government; and in the WMD agreement in the final reassurances needed to close the deal. Had Libya had to guard against policy concessions opening the way to efforts at regime change, it would have been less likely to make its dramatic policy changes.

Third, the negotiating strategy of measured linkages between the carrots offered and the concessions demanded established reciprocity. Although reciprocity was temporarily in doubt when the talks were suspended during the 2000 US presidential election season and when the Bush administration initially was reluctant to reinitiate them, the cadence overall was consistent, balanced, and steady: UN sanctions suspended for the initial agreement to the Lockerbie trial compromise and the surrender of the Libyan suspects; British-Libyan diplomatic relations restored only after agreement on the Yvonne Fletcher case (shooting of a British policewoman outside the Libyan Embassy in London); European

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24   Andrew C. Winner, 'The Proliferation Security Initiative: The New Face of Interdiction', in *Washington Quarterly*, vol. 28, no. 2, Spring 2005, p. 137; Carla Anne Robbins, 'Cargo Seizure Fueled Libya Arms Shift', in *Wall Street Journal*, 31 December 2003; Robin Wright, 'Ship Incident May Have Swayed Libya', in *Washington Post*, 1 January 2004; and Sharon A. Squassoni and Andrew Feickert, 'Disarming Libya: Weapons of Mass Destruction', Congressional Research Service Report for Congress, RS21823, 22 April 2004, p. 3.

25   Robbins, 'Cargo Seizure Fueled Libya Arms Shift'; Wright, 'Ship Incident May Have Swayed Libya'; and Squassoni and Feickert, 'Disarming Libya', p. 3.

Union lifting of diplomatic sanctions but only some economic ones in response to Libyan renunciation of terrorism; US-Libyan confidence-building measures along the way—a commitment to the secret talks in themselves being one of them; US follow-through on easing its unilateral sanctions, taking steps toward normalisation of diplomatic relations, and other measures once the full WMD agreement was reached and implemented. One of the last stumbling blocks was Gaddafi's insistence on further reassurances about policy change and not regime change, that 'if Libya abandoned its WMD program, the U.S. in turn would drop its goal of regime change'.[26]

The other key set of factors involved changes in Libya's domestic conditions that made the Gaddafi regime more susceptible to coercive diplomacy. Internal dynamics were increasingly making cooperation rather than confrontation with the US-led West in Gaddafi's own interest. Ray Takeyh recounts 'an extraordinary dispute [that] broke out in the higher echelons of the regime' in the mid-1990s between 'pragmatists' stressing the need for structural economic reform and international investment and 'hard-liners' wanting to continue defying the West. For a time Qaddafi 'remained strangely silent, unable or unwilling to make a decision'. But in 1998 he sided with the pragmatists. '"We cannot stand in the way of progress," announced Qaddafi … "The fashion now is the free market and investments."'[27] This development increased the influence of officials in the regime who had become disenchanted with Libya's diplomatic isolation. As Diederik Vandewalle puts it, 'The pragmatism that the new technocrats have urged upon Qadhafi, concern over the economic and political toll of sanctions, and the need for international investment in the country's deteriorating oil infrastructure and in developing new oilfields slowly moved Libya to act upon western demands'.[28]

US unilateral sanctions were the technological and economic key. As one analyst observed, 'Much of the [Libya's] energy infrastructure is based upon U.S. technology resulting from the prevalence of American firms during the country's oil discovery and initial extraction. As a result, the Libyan market "cannot modernize without the assistance of big U.S. oil companies."'[29] Time, it appears, was becoming of the essence. As Hammouda el-Aswad, head of Libya's National Oil Corporation, explained in a 1999 interview, 'The Americans knew our equipment, and they placed every item on the sanctions list. Then, when the U.N. embargo was

26 Michael Hirsh, 'Bolton's British Problem', in *Newsweek*, 2 May 2005, p. 30.

27 Quoted in Takeyh, 'The Rogue Who Came In from the Cold', pp. 65–66. See also Diederik Vandewalle, 'The Origins and Parameters of Libya's Recent Actions', in *Arab Reform Bulletin*, vol. 2, no. 3, Carnegie Endowment for International Peace, March 2004.

28 Vandewalle, 'The Origins and Parameters of Libya's Recent Actions'.

29 Christopher Boucek, 'Libya's Return to the Fold?', FPIF [Foreign Policy in Focus] Policy Report, 5 April 2004, pp. 3–4, available at http://www.fpif.org/papers/2004libya.html, accessed 25 Jun 12.

imposed in 1992, the problem became even more complicated because we couldn't buy on the open market. Some machinery has been smuggled in, but we've now used up all our stores. We've had to go to junkyards to recondition discarded parts, and we've even attempted to manufacture our own parts, but we haven't been successful … Since [American companies] are way ahead of Europe in technology, especially in the enhancement of depleted fields, we need their help'.[30] Libyans also knew that the prices they could get for oil and gas concessions would be much higher if US investors and companies were part of the bidding.

Libya also came to see its security interests increasingly aligned with countries once viewed as adversaries: 'he [Gaddafi] was regarded by the al-Qaeda types as no better than the Saudi government,' Lisa Anderson states, 'no better than any of these other governments that they hate. He found himself, ironically, on the same side as all of these governments that he had excoriated for a decade at least'.[31] In 1998 Libya issued the first Interpol arrest warrant against al-Qaeda leader Osama bin Laden, accusing him of involvement in the killing of two German anti-terrorism agents in Tripoli.[32] Post-9/11 some quiet anti-terrorism cooperation with the United States had begun.

In the last stages of the WMD negotiations, while some 'circuit breaker' bureaucratic factions invested in the weapons programs urged resistance against US demands, 'transmission belt' groups whose interests were being hurt by the *status quo* and would be substantially helped by greater integration into the global community were stronger. This of course is a relative statement in a dictatorship such as Gaddafi's, as ultimately the crucial decisions were his. But the logic is the same, less about a rogue leader changing his basic goals than about where shifts in domestic political and economic conditions make concessions to the coercing state in the leader's own interests in self-perpetuation.

The success achieved clearly was not a total one. Even before the events of 2011, Gaddafi had more than demonstrated that he had made a deal but had not become a new person. There was the plot to assassinate the Saudi Crown Prince (now King). There were continued human rights violations. But important policy goals were achieved. A counterpoint to the 2003 invasion of Iraq for WMD counter-proliferation was validated. And when the 'Arab Spring' came to Libya in 2011, the

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30   Milton Viorst, 'The Colonel in His Labyrinth', in *Foreign Affairs* , vol. 78, no. 2, March/April 1999, pp. 71–72.

31   Lisa Anderson, 'Libyan Expert: Qaddafi, Desperate to End Libya's Isolation, Sends a "Gift" to President Bush', Council on Foreign Relations Interview with Lisa Anderson, 22 December 2003, available at http://www.cfr.org/libya/libyan-expert-qaddafi-desperate-end-libyas-isolation-sends-gift-president-bush/p6617, accessed 25 Jun 12.

32   Anjali Bhattacharjee and Sammy Salama, 'Libya and Nonproliferation', CNS Research Story, James Martin Center for Nonproliferation Studies, Monterey, CA, 24 December 2003.

absence of WMD, either for Gaddafi to resort to or others to acquire, precluded a major threat.

Iraq 1990–91: Coercive Diplomacy Failure

In this case, the distinction is between the initial strategy following the August 1990 Iraqi invasion of Kuwait, which did fit as coercive diplomacy and which failed, and the counter-war launched in January 1991 which then succeeded. The focus herein is on the former.

Although Iraq and Kuwait had a border dispute as well as some other issues, the real issue was Saddam Hussein's desire to become the dominant power in the Persian Gulf region. Indeed, his forces were poised to keep going into Saudi Arabia, an even more strategic country and a close US ally. The initial coercive diplomacy strategy was to get Saddam to withdraw his forces from Kuwait and deter him from invading Saudi Arabia (limited objective) through the threat to use military force and the imposition of economic sanctions (coercive but limited means) and various diplomatic initiatives (negotiations). 'This will not stand', President George H. W. Bush declared. The Operation *Desert Shield* deployment to Saudi Arabia and the surrounding Persian Gulf (countries and at sea) was the most rapid US military build-up since World War II. A multilateral coalition was built including most of Western Europe, Japan (as a funder but not military deployer given the self-defence force limitations in its constitution), and much of the Arab world, and with some support even from the Soviet Union. The UN Security Council moved swiftly to demand full and unconditional Iraqi withdrawal (UNSCR 660 passed the day after the invasion), impose economic sanctions (UNSCR 661, passed a few days later) and take other steps such as a naval blockade and other diplomatic condemnations. As the crisis wore on and Saddam remained intransigent, the UNSC passed a resolution authorising 'all necessary means' to get Iraqi troops out of Kuwait, including the use of military force. The UN set a deadline of 15 January for the Iraqi withdrawal. When the deadline was not met, Operation *Desert Shield* became Operation *Desert Storm* and the US-led military force went to war.

The general point that the American scholar Robert Art makes pertains here: 'Wherever one draws the line between limited and full-scale use [of military force], if the coercer has to cross that line to achieve its objectives, then, by definition, coercive diplomacy has failed. In [such a] case, war, not coercive diplomacy, produced the change.'[33] Just as the reasons for the Libya 2003 success follow the coercive diplomacy framework, so too do the reasons for the Iraq 1990–91 failure.

Coercive Credibility. Despite the size of the Operation *Desert Shield* build-up and the imposition of UN authorised economic sanctions, Saddam Hussein apparently

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33   Robert J. Art, 'Introduction', in Art and Cronin, *The United States and Coercive Diplomacy*,
       p. 10.

was not convinced that the United States would take major military action, and if it did that it would have the political will to see it through. Some of this may have come from the U.S. over-tilt to Iraq during the Iran-Iraq war (a war Iraq started). Both the Reagan and the Bush administrations were so fixated on the US-Iran tensions coming out of the 1979 Iranian Islamist revolution and the deep trauma of the 1979–81 hostage crisis that it failed to see past the old adage 'the enemy of my enemy is my friend' that *the enemy of my enemy may still be my enemy, too*.[34] Even after the Iran-Iraq war was over and in the very days in late July 1990 when it was known that Saddam was mobilising his forces for an invasion, the Bush diplomacy was sending less than firm messages. Saddam also apparently drew the lesson from the 1983–84 US abrupt withdrawal from Lebanon following the terrorist bombing of the Marine barracks that if it did come to war the Americans would lack the political way for staying power. That these calculations were incorrect, and the US did go to war and he was not able to inflict significant casualties, is a separate point from their having been a key part of why the coercive diplomacy strategy lacked sufficient credibility.

Reciprocity. Terms of reciprocity could not be worked out diplomatically largely because Saddam was not interested in any deal that required withdrawal from Kuwait. Negotiation attempts were made by UN Secretary-General Javier Pérez de Cuéllar and by the Soviets. Various formulas were tried for reciprocity of steps that could provide Saddam with some face-saving and resolution of related issues, while keeping prompt and full withdrawal as called for in UNSCR 660 as the bottom line. As the 15 January deadline approached Yevgeny Primakov, a top aide to Soviet President Mikhail Gorbachev who had longstanding relations with Saddam and other Iraqi leaders, offered Saddam more than the US and much of the international community wanted. Even that, though, was rejected by Saddam.

Proportionality. The instruments available were too limited given the scope of the objective. For Saddam this was not about a small policy change, it was about his quest for regional dominance. Threats of force, sanctions and diplomatic pressure were too limited instrumentalities to achieve such a big objective.

Circuit Breakers. The sanctions imposed had only been operating for a few months, which even in a more open political system would not be a lot of time to impact elite interests sufficiently to create incentives for pressuring their government. And this was Iraq where, even compared to other Arab world dictators, Saddam was among the most brutal. Moreover, many groups stood to benefit from control over Kuwait, so not a lot of pressure was coming through the circuits. (Among the intriguing findings in the interviews conducted and papers captured following the 2003 US invasion of Iraq were how Saddam may have

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34   Bruce W. Jentleson, *With Friends Like These: Reagan, Bush and Saddam, 1982–1990*, W.W. Norton, New York, NY, 1994.

believed his WMD programs were still making progress because top aides were afraid to tell him that they were not—in large part due to the success of UNSCOM (United Nations Special Commission) and other UN inspection regimes established in the 1990s).

In sum, both the success and the failure of coercive diplomacy follow the framework of a coercer strategy needing proportionality, reciprocity and coercive credibility, and a target state defence made porous by transmission belts more than reinforced by circuit breakers.

Lessons and Implications for the Current Policy Agenda

It is clear that coercive diplomacy will continue to be a strategy to be considered in various cases. Among the major cases on the current agenda (May 2012) for which it is being applied and/or debated are Iran, North Korea and Syria. As stated at the outset, while each case policymakers face has its distinctiveness, none are strictly unique. A strategic framework provides a working template within which case-specific strategies are best developed. For coercive diplomacy strategy, six main implications follow from our analysis. In brief:

(1)   *Balancing Coercion and Diplomacy:* There is greater potential complementarity between coercion, including threats or limited uses of force, and diplomacy than more singular advocates of one or the other tend to convey. This requires focus not just on process but on strategy and tactics.

(2)   *Deft Diplomacy:* Skilled statecraft matters. That may sound like a truism but too often gets taken for granted. Major coercive diplomacy successes such as the 1962 Cuban missile crisis and the 2003 Libya case could well have gone the other way had it not been for the deftness of the diplomacy.

(3)   *Policy Change, Not Regime Change:* That policy change is possible without regime change is a crucial point. But the point is even stronger: pursuing regime change can be counterproductive to actually achieving policy change. In the Libya 2003 case, for example, taking regime change off the table early in the negotiations was crucial to building the trust needed to achieve the quite substantial policy changes of ending WMD programs and support for terrorism.

(4)   *Sanctions Re-Revisionism:* Economic sanctions can be an effective part of coercive diplomacy strategy when imposed multilaterally and sustained over time. The undifferentiated debate over whether sanctions do or do not work needs to be more focused on establishing the conditions under which they are most likely to be effective.

(5)   *Multilateral Support Crucial:* Multilateral support not only gives coercive diplomacy greater coercive capacity (be it sanctions or other coercive measures), it also confers a degree of legitimacy that no nation can claim

acting on its own, which especially in the 21st century is a source of power not just values. And as a tactical matter, the target state needs to see that it cannot split the international coalition.

(6) *Know Thy Target:* The dynamics of coercive diplomacy are driven to a great extent by the interaction of external pressures and incentives with the target state's domestic politics and economy. This is not a strict function of regime type. Dictatorships have their own politics. The key is whether key domestic actors and forces are arrayed as transmission belts for or circuit breakers against the external pressure. While these are not fully knowable, high-quality country analysis, through intelligence but also through open source specialists, is crucial.

In our conference discussion we can discuss how these general policy guidelines apply to major cases on the current policy agenda, such as Iran, North Korea, and Syria.

Air Power as a Coercive Instrument: Military Coercion Theory and its Limitations

Dr Eric V. Larson[1]

In recent decades, the North Atlantic Treaty Organization (NATO) has employed air power in Operation *Deliberate Force* (Bosnia, 1995), Operation *Allied Force* (Kosovo, 1999),[2] as part of NATO's International Security Assistance Force (Afghanistan, 2001—), and, most recently, in Operation *Unified Protector* (Libya, 2011): history thus suggests a recurring role for air power in both NATO military operations, and in 'coalitions of the willing' partnering self-selected members of the NATO alliance.[3]

In this paper, I summarise some key findings of a 1999 RAND study of air power as a coercive instrument that I was associated with, with an emphasis on our discussion of coercion theory and its limitations, and key factors commonly associated with success or failure.[4] I then draw from this review of theory to

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1   I would like to thank RAND colleagues Paula Thornhill, Karl Mueller, and Alan Vick for their reviews and comments on an earlier version of this paper. The conclusions and opinions expressed in this paper are my own, and in no way represent the official positions of the RAND Corporation or any of its sponsors.

2   For an excellent analysis of the coercive dimensions of Operation *Allied Force* see Stephen T. Hosmer, *The Conflict Over Kosovo: Why Milosevic Decided to Settle When He Did*, RAND Corporation, MR-1351, Santa Monica, CA, 2001; available at http://www.rand.org/pubs/monograph_reports/MR1351.html, accessed 21 May 2012.

3   For a review of country contributions to 40 coalition military operations that included NATO allies, see Myron Hura et al., *Interoperability: A Continuing Challenge in Coalition Air Operations*, RAND Corporation, MR-1235, Santa Monica, CA, 2000, Appendix A; and Eric V. Larson et al., *Interoperability of U.S. and NATO Allied Air Forces: Supporting Data and Case Studies*, RAND Corporation, MR-1603, Santa Monica, CA, 2003.

4   The books and papers that have addressed the theory of military coercion are too numerous to review in this paper, but I believe that the findings of our 1999 report have held up well. I found particularly valuable Peter Viggo Jakobsen, 'Pushing the Limits of Military Coercion Theory', in *International Studies Perspectives*, vol. 12, 2011, pp. 153–170; Karl Mueller, 'Strategies of Coercion: Denial, Punishment, and the Future of Air Power', in *Security Studies*, vol. 7, no. 3, 1998, pp. 182–228; and Dr Karl Mueller, 'The Essence of Coercive Air Power: A Primer for Military Strategists', in *Air & Space Power Journal*, September 2001. Other relevant works include: Robert A. Pape, Jr., 'Coercive Air Power in the Vietnam War' in *International Security*, vol. 15, no. 2, Autumn 1990, pp. 103–146; Robert A. Pape, *Bombing To Win: Air Power and Coercion in War*, Cornell University Press, Ithaca, NY, 1996; Daniel L. Byman and

offer some observations on whether Operation *Unified Protector* (Libya, 2011) constituted an act of military coercion, and pose a series of questions about Libya that flow from the factors associated with coercive success and failure that we identified in our report.[5] I conclude the paper with some suggestions for future directions in scholarship on military coercion.[6]

A Summary of Air Power as a Coercive Instrument[7]

The study that led to publication of *Air Power as a Coercive Instrument* was motivated by the recognition that air power had been called upon to play a major role in coercing foes in the Persian Gulf, the Horn of Africa, and Europe, and the need 'to better understand the phenomenon of coercion and learn what is necessary to carry it out, anticipate likely constraints on the use of force, and determine how air power can best be used to coerce'.[8] It also pointed to a puzzle:

> ... despite its overwhelming military power, the United States often fails to coerce adversaries successfully or completely. In a number of recent crises, U.S. adversaries have openly defied the United States, complied incompletely

Matthew C. Waxman, 'Kosovo and the Great Air Power Debate', in *International Security*, vol. 24, no. 4, Spring 2000, pp. 5–38; Scott A. Cooper, 'Air Power and the Coercive Use of Force', in *Washington Quarterly*, vol. 24, no. 4, Autumn 2001, pp. 81–93; Stephen T. Hosmer, *The Conflict Over Kosovo: Why Milosevic Decided to Settle When He Did*, RAND Corporation, MR-1351, Santa Monica, CA, 2001; Andrew L. Stigler, 'A Clear Victory for Air Power: NATO's Empty Threat to Invade Kosovo', in *International Security*, vol. 27, no. 3, Winter 2002/03, pp. 124–157; Angelique L. Faulise, *Two Theories on the Use of Air Power: Warden vs. Pape*, National Defense University, National War College, Washington, DC,, 2003; James R. Cody, *Coercive Airpower in the Global War on Terror: Testing Validity of Courses of Action*, School of Advanced Military Studies, United States Army Command and General Staff College, Fort Leavenworth, KS, 2003; Robert A. Pape, 'The True Worth of Air Power', in *Foreign Affairs*, vol. 83, no. 2, March–April 2004, pp. 116–130; Merrill A. McPeak and Robert Pape, 'A Neater Way to Win', in *Foreign Affairs*, vol. 83, no. 5, September 2004, pp. 160–163; Susan Hannah Allen, 'Time Bombs: Estimating the Duration of Coercive Bombing Campaigns', in *Journal of Conflict Resolution*, vol. 51, no. 1, February 2007, pp. 112–133; David Milne, ' "Our Equivalent to Guerrilla Warfare": Walt Rostow and the Bombing of North Vietnam, 1961–1968', in *Journal of Military History*, vol. 71, no. 1, January 2007, pp. 169–204; and Daniel R. Lake, 'The Limits of Coercive Airpower: NATO's "Victory" in Kosovo Revisited', in *International Security*, vol. 34, no. 1, Summer 2009, pp. 83–112.

5   Put another way, the present paper is not an analysis of the Libya campaign, but identifies some questions that might fruitfully be addressed in a systematic and comprehensive study of the subject.

6   Although I am quite familiar with the recurring debates over air power's contributions to outcomes in past military operations, I have tried to avoid weighing in on these debates in favour of a more forward-looking view to improving scholarship and its relevance to policy and strategy.

7   Daniel L. Byman, Matthew C. Waxman, and Eric Larson, *Air Power as a Coercive Instrument*, RAND Corporation, MR-1061, Santa Monica, CA, 1999.

8   ibid, p. iii.

with U.S. demands, or otherwise shrugged off threats of force. This report seeks to improve our understanding of coercive diplomacy, focusing particular attention on the contributions of air power.[9]

To better understand the phenomenon of coercion and the role of air power, we addressed definitional and theoretical issues, the limitations of existing theory, and factors that were associated with success or failure in recent cases where air power was used as a coercive instrument, as well as some new considerations, such as domestic constraints on coercion, and the specific challenges associated with the coercion of non-state actors.

A recent review of military coercion theory by Peter Viggo Jakobsen suggests that there has been only limited progress in resolving the sorts of definitional and analytic challenges related to coercion theory and its application that we identified in our report, and little effort by scholars to address the sorts of policy problems that we identified.[10] Accordingly, rather than covering the same ground in Jakobsen's review of the recent literature on military coercion, in this section of my paper I focus on theoretical and empirical findings from our report that appear still to be relevant to the employment of air power as a coercive instrument.

Defining Coercion

We noted in our study that 'coercion is a commonly used term with no agreed-upon meaning,'[11] and offered the following definition of coercion:

> Coercion is the use of threatened force, including the limited use of actual force to back up the threat, to induce an adversary to behave differently than it otherwise would.[12]

There are a number of important features of this definition.[13]

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9   ibid, p. xiii. Classic discussions of this 'paradox of power'—essentially, that small powers may defeat large powers by using all of the power at their disposal in cases where large powers are using only a small portion of theirs—can be found in John Harsanyi, 'Measurement of Social Power, Opportunity Costs, and the Theory of Two-Person Bargaining Games', in *Behavioral Science*, vol. 7, no. 1, 1962, pp. 67–80, and Jack Hirshleifer, 'The Paradox of Power', in *Economics & Politics*, vol. 3, no. 3, 1991, pp. 177–200. See also Ivan Arreguin-Toft, 'How the Weak Win Wars: A Theory of Asymmetric Conflict', in *International Security*, vol. 26, no. 1, Summer 2001, pp. 93–128.

10   Jakobsen identifies three main factors limiting progress on military coercion theory: '(i) vague and unclear definitions of key concepts and variables, (ii) limited systematic and rigorous empirical analysis, and (iii) a reluctance to address known policy problems'. See Peter Viggo Jakobsen, 'Pushing the Limits of Military Coercion Theory', in *International Studies Perspectives*, vol. 12, 2011, pp. 153–170.

11   Byman, Waxman and Larson, *Air Power as a Coercive Instrument*, p. 9.

12   ibid, p. 10.

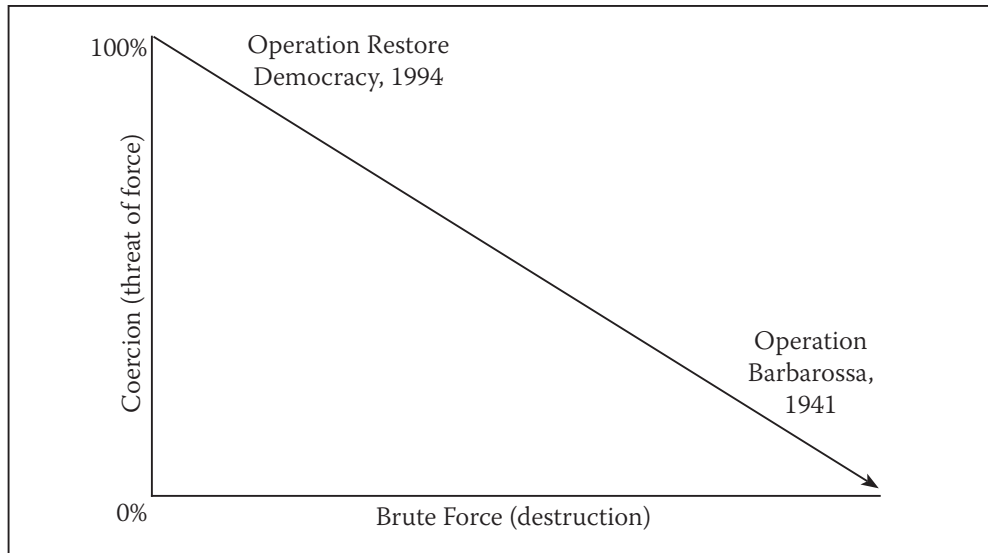13   Jakobsen ('Pushing the Limits of Military Coercion Theory', pp. 155–156) does an admirable job

Figure 1: Coercion Versus Brute Force

First, the definition points to threats and *limited* uses of force to back up those threats: 'coercion is not destruction'.[14] One way of viewing this is that there is some implied threshold in terms of, for example, the scale of operations, the scope of destruction, the duration of military action, or relative proportions of effort devoting to threatening what an adversary values or simply destroying his capabilities, which, once exceeded, represents a qualitative shift from being an instance of coercion to what Schelling called 'brute force' (see Figure 1).[15]

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of unpacking and harmonising the terminology of military coercion theory.

14   Byman, Waxman and Larson, *Air Power as a Coercive Instrument*, p. 13.

15   We quote Schelling's observation that: 'brute force succeeds when it is used, whereas the power to hurt is most successful when held in reserve. It is the threat of damage, or of more damage to come, that can make someone yield or comply. It is latent violence that can influence someone's choice …'; see Thomas C. Schelling, *Arms and Influence*, Yale University Press, New Haven, CT, 1966, p. 3. While there seems to be broad agreement among scholars that coercion revolves around threats and limited uses of force, to my knowledge, scholars have not sought to operationalise these thresholds, and in re-reading our report, it becomes clear that we might fruitfully have devoted additional attention to this issue. In our study, we note that '[e]specially once an armed conflict begins, an adversary's behavior will always be dictated by a combination of both brute force and threatened (coercive) force', but that the line 'between brute force and coercion cannot always be discerned'; see Byman, Waxman, and Larson, *Air Power as a Coercive Instrument*, p. 13.

In his recent paper, Peter Viggo Jakobsen offers a potentially useful operational definition that provides useful guidance for resolving these threshold issues. He writes:

> The proposed definition has two components that are directly observable and easy to measure: (i) a communication of limited intent to the adversary and (ii) military operations that do not achieve decisive outcomes.[16]

A second feature of our definition is that, in keeping with most theorists' view, it is forward-looking: it focuses on influencing *future* adversary decision-making and behaviour by holding at risk what the adversary values most (i.e., threats and use of force against counter-value targets), not on eliminating the adversary's ability to act by destroying a preponderance of the military or other capabilities that would enable him to act (i.e., counterforce targets). In this sense, coercion is generally conceived in terms of influencing the adversary's psychology, decision-making, and choices, rather than in terms of eliminating capabilities that make it impossible for him to act as he would like.

A third feature of our definition is that it focuses attention on the marginal impact of coercive efforts to influence an adversary to behave differently than it otherwise would (and implicitly, in the desired direction),[17] and not on whether the desired policy outcomes from coercion are in fact attained. In this view, coercion may still make a contribution to an outcome even if that outcome is well short of the actual desired outcome.

The Cost-Benefit Calculus of Coercion

Our study observed that many (or perhaps most) scholars treat the theory of coercion in cost-benefit or expected-utility terms, at least as a starting-point for analysis.[18] In this view, the parameters of the cost-benefit calculus are variables that are believed to influence how targets of coercion assess whether to comply or resist a coercer's demands:

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16   Jakobsen, 'Pushing the Limits of Military Coercion Theory', p. 163.

17   This is very similar to the political scientist Robert A. Dahl's concept of power. See Dahl, 'The Concept of Power', in *Behavioral Science*, vol. 2, 1957, pp. 201–215.

18   Particular attention was paid to the deductive theoretical work of Thomas Schelling, on the one hand, and the inductive work of Alexander George and William Simons, and their associates. See Schelling, *Arms and Influence*; and Alexander L. George and William E. Simons (eds), *The Limits of Coercive Diplomacy*, Westview Press, Boulder, CO, 1994. As one example of benefit-cost formulation, in his *Bombing to Win*, Robert Pape wrote:
Success or failure is decided by the target state's decision calculus with regard to costs and benefits … When the benefits that would be lost by concessions and the probability of attaining these benefits by continued resistance are exceeded by the costs of resistance and the probability of suffering these costs, the target concedes.
See Robert A. Pape, *Bombing To Win: Air Power and Coercion in War*, Cornell University Press, Ithaca, NY, 1996, pp. 15–16.

- the policy benefits or value to the adversary of resisting (or complying with) the coercer's demands;

- the costs or price an adversary expects to pay in resisting (or complying with) the coercer's demands;

- the probabilities associated with outcomes, and their benefits, and costs; as well as

- perceptions that may affect the way decision makers value benefits, costs, or outcomes, including perceptual anomalies that may distort or otherwise affect decision making.[19]

Put simply, coercion should work when the anticipated losses and suffering associated with the threat exceed the anticipated benefits gained by resisting.[20]

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19 Among the most frequently cited perceptual considerations is Daniel Kahneman and Amos Tversky's work on prospect theory, which demonstrated that risk can affect utility functions in such a way that the monetary value of losses and gains in gambles of equal value are not weighted identically, and that the negative utility of losses looms larger than the positive utility of equal gains. See Daniel Kahneman and Amos Tversky, 'Prospect Theory: An Analysis of Decision under Risk', in *Econometrica*, vol. 47, no. 2, 1979, pp. 263–291, available at http://www.princeton.edu/~kahneman/docs/Publications/prospect_theory.pdf, accessed April 2012. For an application of prospect theory to the theory of coercive air power, see Jon A. Kimminau, *The Psychology of Coercion: Merging Airpower and Prospect Theory*, Thesis presented to the Faculty of the School of Advanced Airpower Studies, Air University, Maxwell Air Force Base, Alabama, June 1998.

20 Byman, Waxman and Larson, *Air Power as a Coercive Instrument*, p. 15.

We did not ourselves offer a specific equation to describe this calculus in our 1999 report, but one very simplified form that captures the basic logic we described is:

$$R = P_S * (B_S\text{-}C_S) + (1\text{-}P_S) * (B_F\text{-}C_F)$$

where:

R = the expected value of resisting a coercer (a positive value means that the target can be expected to resist);

P_S = the target's estimated probability of successfully resisting a coercer (e.g. based on an assessment of the balance of capabilities on each side);[21]

B = the policy benefits of successfully resisting (B_S), or policy losses associated with failing (B_F);

C = the costs associated with being successful (C_S), or failing (C_F); and

$1\text{-}P_S$ = the target's estimated probability of failing in an effort to resist a coercer.[22]

Where coefficients for risk orientation or other perceptual factors that shape perceptions and the target's valuation of costs, benefits, or probabilities are implied.[23]

Our study also identified a number of important limitations to the cost-benefit-based approach, including its limited relevance to policy, measurement pathologies, and uncertainty in the meaning of 'success'.[24]

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21   The probability of winning or losing might be estimated, for example, on the basis of a calculation of the balance of effective military and other capabilities employed by each side. See Jakobsen, 'Pushing the Limits of Military Coercion Theory', p. 165.

22   The (B_S-C_S) term represents the net benefits associated with winning, while (B_F-C_F) represents the net benefits associated with losing.

23   For his part, Pape (*Bombing To Win: Air Power and Coercion in War*, p. 16) offers the following equation: $R = B * p(B) - C * p(C)$
where R = the value of resistance; B = the potential benefits of resistance; p(B) = the probability of attaining benefits by continued resistance; C = the potential costs of resistance; and p(C) = the probability of suffering costs. According to Pape, Military vulnerability represents combined effects of B and p(B) Civilian vulnerability represents combined effects of C and p(C); concessions occur when R < 0. Other, more sophisticated and potentially useful formulations also are available. See, for example, Bruce Bueno de Mesquita, *The War Trap*, Yale University Press, New Haven, CT, 1981; 'The War Trap Revisited', in *American Political Science Review*, vol. 79, no. 1, March 1985, pp. 156–177; *War and Reason: Domestic and International Imperatives*, Yale University Press, New Haven, CT, 1992; 'A Decision Making Model: Its Structure and Form', in *International Interactions*, vol. 23, no. 3, 1997, pp. 235–266.

24   Jakobsen ('Pushing the Limits of Military Coercion Theory') appears to take a similar view on the limits of such equations.

Limited Relevance to Policy. We summarised our thinking on the matter of coercion theory's limited relevance to policy as follows:

> First, the standard model's abstract nature often produces correspondingly abstract advice when used by academics to advise policymakers. Second, the model promotes uniform thinking, treating all adversaries as similar despite their unique attributes. Third, studies have focused on Cold War concerns, such as coercing a rival superpower, which are of little interest today. And, finally, many studies of coercion focus on coercion in war, ignoring the role that it can play in the entire spectrum of crises.[25]

To illustrate the first point, our cost-benefit equation—a highly simplified portrayal of the decision-making logic a coercive target might use—presents the planner with a number of vexing questions: how should we assess the coercive target's own estimates of the probability of success and failure? How should we assess the coercive target's valuation of the benefits and costs associated with success and failure? And even such prosaic issues as how do we put policy benefits and costs on the same scale so that the latter can be subtracted from the former? These are among the many issues that most scholars have not addressed.[26]

Measurement Pathologies. We summarised the measurement pathologies associated with the benefit-cost calculus as follows:

> Many studies do not capture the dynamic nature of coercion or wrongly treat it as a discrete event. Miscoding of data is also common – various studies have not consistently recognised the success or failure of coercion. These and related problems combine to lead analysts to misunderstand causality, which is ultimately where the military planner most needs insight.[27]

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25 Byman, Waxman and Larson, *Air Power as a Coercive Instrument*, p. 17. Two examples should suffice. One source of coercion theory's limited relevance is that it is quite abstract and difficult to operationalise into political-military strategy. As we note in our 1999 report, Thomas Schelling was asked to develop a coercive campaign for Vietnam based upon his earlier theoretical work on coercion, but refused or was unable to operationalise this theory in a campaign strategy or plan. As a result, Alexander George began his long program of research on influence and actor-specific behavioural models with the aim of enriching the earlier cost-benefit work.

26 That said, I believe that the expected utility or agent-based rational choice stakeholder models of the American political scientist Bruce Bueno de Mesquita and his associates offer some promise in addressing many of the issues of concern to air power theorists and planners. Indeed, in recent years I have been leading a team that has been developing a suite of models based upon this work for use in policy and campaign analyses. Unbeknownst to us, we appear to have been working in parallel with an Australian team led by Jason B. Scholz. See Jason B. Scholz, Gregory J. Calbert, and Glen A. Smith, 'Unravelling Bueno De Mesquita's group decision model', in *Journal of Theoretical Politics*, vol. 23, no. 4, October 2011, pp. 510–531.

27 Byman, Waxman and Larson, *Air Power as a Coercive Instrument*, pp. 19–20. Among the measurement pathologies we identified were coercion theory's treatment of a coercion as a discrete event and its failure to capture the dynamics of coercion and counter-coercion, and

Uncertainty in the Meaning of 'Success'. Last was the challenge of how to define and measure 'success', which we described as follows:

> A danger when measuring coercion is to confuse instances of brute force, where the desired behavior is physically imposed on the adversary, with cases where the adversary retains the means to resist but chooses not to [do so] … When analyzing coercion, analysts often forget that the threat of future force, not force itself, should cause the desired behavior in instances of successful coercion. Did the adversary choose to change its behavior, or was it effectively denied any option other than the behavior desired?[28]

> Another problem…is that many studies of coercion emphasize absolute, binary definitions of success rather than taking a more nuanced approach. Studies of air power and coercion many times focus on such questions as whether air strikes alone compelled Japan to surrender during World War II rather than taking the more intuitive, and more analytically sound, approach of determining whether air strikes affected opponents' decisionmaking in a significant way. Even limited effects, when combined with other coercive instruments, may be enough to change adversary behavior. The current literature's narrow focus on whether a coercive instrument alone achieved objectives or failed outright leads to arbitrary and misleading coding of coercive strategies. Moreover, this focus emphasizes *whether* coercion worked, not *how*. Yet the *how* question offers the greater insight for designing future policies.[29]

Conditions Associated With Successful Coercive Outcomes

Our study identified three key conditions associated with successful coercion: escalation dominance, ability to neutralise an adversary's military strategy, and the ability to magnify third-party threats.

> *Escalation Dominance.* First, coercive diplomacy is dramatically enhanced once a coercer achieves 'escalation dominance'. Coercion is more likely to succeed when the coercer can increase the level of costs it imposes

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disagreements about, or miscoding of, outcomes.

28   ibid, pp. 22–23.

29   ibid, p. 23. In his book, for example, Pape (*Bombing To Win: Air Power and Coercion in War*) notes the importance of understanding the following causal chain: Force > Targets > Mechanism > Policy change, especially the mechanism by which threats and use of force lead to policy changes. As Karl Mueller wrote:
The mechanism is the centerpiece of any coercive strategy, yet airmen and air-power theorists often pay scant attention to it, typically immersing themselves instead in the details of tactics, munitions, and target selection.
Karl Mueller, 'Strategies of Coercion: Denial, Punishment, and the Future of Air Power', in *Security Studies*, vol. 7, no. 3, Spring 1998, pp. 182–228.

> *while denying the adversary opportunity to neutralize those costs or counterescalate.*[30]

> *Negation of Adversary Military Strategy.* Second, coercion is more likely to succeed when the coercer negates an adversary's military strategy for victory. Such a 'denial' strategy prevents the adversary from obtaining the anticipated benefits of aggression, making it more likely to concede.[31]

We also pointed to the double-edged sword inherent in efforts to magnify threats from third-party actors, particularly internal ones:

> *Magnification of Third-Party Threats.* A third factor contributing to successful coercion is the magnification of third-party threats. A promising coercive strategy harnesses the effects of threats against or military strikes on an adversary's vulnerability to another, external rival. Alternatively, threats or strikes can magnify an adversary's perceived worries of internal instability, thereby radically altering its anticipated costs and benefits of continued defiance. The primary danger of the latter strategy is that internal instability can operate unpredictably on regime decisionmaking, perhaps even hardening rather than weakening resistance to the coercer's demands.[32]

Three Recurring Challenges for Coercion

In addition, our study identified three recurring challenges that have impeded past coercive strategies: the need for accurate intelligence, maintaining the credibility of threats, and feasibility:

> *The Accuracy of Intelligence.* The primary intelligence challenge is to discern the interests and nature of the adversary. When the benefits to the adversary of resistance are relatively low, less is required to compel it to abandon its actions … By contrast, when an adversary is fighting for the defense of its homeland or other vital goals, coercion becomes far more difficult and at times impossible. In such cases, the costs of concessions may be too high, making continued defiance the better option for the adversary … .A common intelligence deficiency—often translating to a failure of coercion—is poor assessment of an adversary's determination, creativity, and resilience.[33]

> *The Credibility of Threats.* A problem common to failures of coercion— one identified in many studies on the subject—is doubts about a coercer's

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30 Byman, Waxman and Larson, *Air Power as a Coercive Instrument*, p. xiii. George (George and Simons, *The Limits of Coercive Diplomacy*) identified as 'particularly significant' the opponent's fear of unacceptable escalation. Jakobsen ('Pushing the Limits of Military Coercion Theory', p. 165) states: 'The central question is in short whether the coercer enjoys escalation dominance'.

31 Byman, Waxman and Larson, *Air Power as a Coercive Instrument*, p. xiv. Jakobsen ('Pushing the Limits of Military Coercion Theory', p. 164) identifies this factor as one of five propositions that are worthy of further empirical testing.

32 Byman, Waxman and Larson, *Air Power as a Coercive Instrument*, p. xiv.

33 ibid, pp. 44–45.

credibility. Successful coercion depends on the threat of future costs. When an adversary doubts the coercer can escalate—or even sustain—operations, the perceived costs of defiance fall.[34]

Feasibility. Coercing powers may attempt the impossible, trying to change the decisionmaking calculus of an adversary that cannot, for a variety of reasons, alter its behavior sufficiently to meet the coercing power's demands. In essence, some adversaries cannot be coerced. An adversary regime may weigh threats to its personal or institutional survival more highly than the loss of territory or other threats from a coercing power.[35]

On this last point, Bruce Jentleson summarises his analysis of the Reagan administration's coercive efforts to overthrow the Nicaraguan regime by noting that coercive actions that aim at, or could lead to, regime change, are among the least likely to result in compliance by the target:

> The case of the Reagan administration's policy toward Nicaragua demonstrates a Type C variant of coercive diplomacy, in which the objective is not just to induce a change in the adversary's policy but to bring about a change in the composition of its government. This is an even less limited objective than Type B [undoing or reversing an action the adversary has already taken], requiring not just the reversal of an action but the undoing of the governing regime itself. Thus, I argue, it is an even more difficult objective for coercive diplomacy to achieve.[36]

More recently, and in a similar vein, Jakobsen identified five propositions that he believes may help to explain the outcomes of coercive efforts, and should be the focus of further empirical testing:

- The more one demands, the harder it is to gain compliance from a coercive target.

- Credible assurances that the coercer will stop short of regime-change are crucial to success.

- Positive inducements should be offered after force has been threatened or used.

- Force should be threatened in a denial rather than a punishment mode.

- Threats and limited use of force can only buy time for diplomacy.[37]

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34   ibid, pp. 49–50.

35   ibid, p. 51.

36   Bruce W. Jentleson, 'The Reagan Administration Versus Nicaragua: The Limits of "Type C" Coercive Diplomacy', in George and Simons, *The Limits of Coercive Diplomacy*, pp. 175–200.

37   Jakobsen, 'Pushing the Limits of Military Coercion Theory', p. 163–165.

WHICH LESSONS MIGHT BE
RELEVANT TO OPERATION *UNIFIED PROTECTOR*?

In this section, I provide a brief overview of Operation *Unified Protector* (Libya, 2011), and then raise questions that focus on the factors we identified in our 1999 report as being associated with coercive success or failure. My aim here is not to provide a definitive analysis, but rather, to identify a set of questions that would seem to be a promising starting-point for further exploration and analysis in a more systematic and detailed fashion.[38]

OVERVIEW OF OPERATION *UNIFIED PROTECTOR*

The first protests in Benghazi began on 15 February 2011, and were quickly and brutally suppressed by the Libyan regime, which led to an expansion of protest activities and further regime efforts to suppress them. On 26 February 2011, the United Nations Security Council passed UNSC Resolution 1970, imposing 'immediate measures to stop the violence, ensure accountability and facilitate humanitarian aid', and referring the matter of possible 'war crimes, crimes against humanity and genocide' committed after 15 February 2011 to the International Criminal Court (ICC).[39]

On 17 March, the Security Council adopted UNSC Resolution 1973, demanding an immediate ceasefire in Libya, including an end to attacks against civilians, which it said might constitute 'crimes against humanity', and authorising a no-fly zone and 'all necessary measures' short of foreign occupation to protect civilians.[40] A coalition consisting of France, the United Kingdom, and the United States

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38   Recent reviews of the Libya campaign can be found in Air Vice-Marshal Stuart Atha, *Libyan Operations: A Defence Perspective*, The Annual Defence Lecture, Chatham House, London, 28 September 2011; the Institute for the Study of War's (ISW) four-part series, including Anthony Bell and David Witter, *The Libyan Revolution, Part 1 – Roots of Rebellion*, September 2011, Anthony Bell and David Witter, *The Libyan Revolution, Part 2 – Escalation & Intervention*, September 2011, Anthony Bell and David Witter, *The Libyan Revolution, Part 3 – Stalemate & Siege*, October 2011, and Anthony Bell, Spencer Butts, and David Witter, *The Libyan Revolution, Part 4 – The Tide Turns*, November 2011; Christian F. Anrig, 'Allied Air Power Over Libya; A Preliminary Assessment', *Air & Space Power Journal*, vol. xxv, no. 4, Winter 2011, pp. 89–109; Fabrizio Coticchia, 'The "Enemy" at the Gates? Assessing the European Military Contribution to the Libyan War', in *Perspectives on Federalism*, vol. 3, issue 3, 2011, pp. 48–70; Royal United Services Institute, *Accidental Heroes: Britain, France and the Libya Operation – An Interim RUSI Campaign Report*, September 2011.

39   U.S. Department of State, 'Fact Sheet: UN Security Council Resolution 1970, Libya Sanctions', 26 February 2011, available at http://usun.state.gov/briefing/statements/2011/157194.htm, accessed April 2012.

40   United Nations Security Council, 'Security Council Approves "No-Fly Zone" Over Libya, Authorizing "All Necessary Measures" to Protect Civilians, by Vote of 10 in Favour With 5 Abstentions', Security Council press release, 17 March 2011, available at http://www.un.org/News/Press/docs/2011/sc10200.doc.htm, accessed April 2012.

conducted the initial military operations until NATO assumed formal command of the operation on 31 March.

As described by NATO, the aim of Operation *Unified Protector* was to 'protect civilians and civilian populated areas under threat of attack'.[41] These efforts included an arms embargo commencing on 23 March 2011, a no-fly zone commencing on 25 March 2011, and use of 'all necessary means'—including air strikes on Libyan ground forces—to protect civilians from attack or the threat of attack, commencing 31 March 2011 under NATO command.[42]

While Operation *Unified Protector* arguably was successful in reducing the threat to civilians from Gaddafi's forces, if it aimed to coerce Gaddafi into ordering a halt to attacks on civilians, there is little or no evidence that it had this effect.[43] Rather, after resisting NATO's nearly seven-month campaign and seeing his military forces reduced by rebel forces and NATO operations, Gaddafi was captured and killed by Libyan rebel forces on 20 October 2011, and NATO declared the operation concluded on 31 October.

Was Operation *Unified Protector* an example of the coercive use of air power? Certainly the duration, scale, and scope of the operation—a 214-day campaign involving 26 500 sorties, including over 9700 strike sorties, and with more than 5900 military targets destroyed, including over 400 artillery or rocket launchers, and over 600 tanks or armoured vehicles—should give us pause: it certainly seems heavily weighted toward the 'brute force' side of Figure 1.[44]

But what of Jakobsen's criteria for classifying an operation as coercive: (i) a communication of limited intent to the adversary and (ii) military operations that do not achieve decisive outcomes.[45] On the first point, my own reading of this is that, while the stated intent of the operation was protection of Libyan civilians, the immediate rejection of offers by Gaddafi representatives to negotiate a transition to elections gave the operation more of a flavour of unconditional regime change, that is, a rather maximalist aim.[46] On the second point, my own view is that

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41   ibid.

42   See NATO, 'NATO and Libya: Operational Media Update', 25 October 2011; and NATO, 'Operation UNIFIED PROTECTOR: Final Mission Stats', 2 November 2011.

43   To be clear, I have no reason to think that NATO believed that Gaddafi could be coerced into capitulating with only a modest application of force.

44   NATO, 'Operation UNIFIED PROTECTOR: Final Mission Stats', 2 November 2011.

45   Jakobsen, 'Pushing the Limits of Military Coercion Theory', p. 163.

46   In June 2011, Gaddafi's son Saif al-Islam told the Italian newspaper *Corriere della Sera* that elections could be held within three months, with transparency guaranteed by the presence of international observers, and that his father would be ready to step aside if he lost the election but would not go into exile. Both Libyan rebel leaders and the US State Department rejected this offer, and some analysts indicated that the offer was insincere and aimed only to sow dissension

Gaddafi loyalist forces were defeated, which represents a decisive outcome. Put another way, Operation *Unified Protector* seems to fail Jakobsen's criteria for a coercive military operation.

Finally, even though Operation *Unified Protector* does not appear to be an example of the coercive use of air power, it may nonetheless be useful to return to the conditions we identified in our 1999 report that are associated with success, and the common challenges that can be encountered in efforts to coerce an adversary, if only to conjecture on how they might have affected the outcome in Libya. Among the factors favouring successful coercive outcomes we identified are:

- *Escalation Dominance.* Did Gaddafi view NATO and the Libyan rebels as having escalation dominance, especially after the defection of Libyan military forces?[47]

- *Threatening an Adversary's Strategy.* Did Gaddafi believe that NATO's enforcement of the no-fly zone and strikes on Libyan military forces threatened his strategy of targeting civilian populations, and prevailing over Libyan rebel forces?

- *Magnifying Third-party Threats.* Did Gaddafi believe that NATO's operations enhanced the military capabilities of the Libyan rebel forces enough to tilt the balance in their favour?

Turning now to the common challenges we identified in our report:

- *Intelligence and Estimation Challenges.* Did intelligence agencies provide an accurate reading of Gaddafi's state of mind, and his unwillingness to accede to UN and NATO demands?

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within NATO. Joe Parkinson, 'Gadhafi's Offer to Hold Elections Swiftly Rejected', *Wall Street Journal*, 17 June 2011.

And in late August 2011, Associated Press reported that Gaddafi's spokesman had offered to begin talks led by Gaddafi's son Saadi, but the offer was rebuffed by rebel leaders, who said that Gaddafi should surrender first, and by NATO nations. David Smith, 'Gaddafi offers to negotiate with Libya rebels over transfer of power', in *The Guardian*, 28 August 2011. There also was some press reporting in late August that Gaddafi's son Saif al-Islam was negotiating his own surrender. See 'Gaddafi son "offers to surrender"', in *The Independent*, 31 August 2011, available at http://www.independent.co.uk/news/world/middle-east/gaddafi-son-offers-to-surrender-2346881.html, accessed April 2012. Saif al-Islam ultimately was captured on 19 November 2011.

It also is probable that, after charges of war crimes by Gaddafi and his forces were referred to the International Court of Justice, Gaddafi had even less of an incentive to capitulate.

47   In February 2011, *The Economist* reported that many Army units had mutinied, two Libyan Air Force pilots had defected to Malta with their aircraft, and only one brigade at Bab al-Aziziya was said to be loyal to him. See 'Endgame in Tripoli', *The Economist*, 24 February 2011. The reason I believe that NATO's escalation dominance should not be overstated is that the forces available to NATO appear to have been capped, and any effort to increase available forces could have been quite contentious.

- *Misperception and Coercion.* Did Gaddafi overestimate his own capabilities and underestimate the capabilities of the forces opposing him, and the associated probabilities associated with victory or defeat?

- *Credibility Challenges.* Once NATO's operation was under way, did Gaddafi doubt the credibility of NATO's threat to use force, or its willingness or ability to continue until he was defeated?

- *Feasibility Challenges.* Did Gaddafi view UN and NATO demands as maximalist demands that aimed at regime change?

An Agenda for Scholars

Our 1999 study identified a range of methodological challenges associated with the analysis of coercion in diplomacy and military operations. Most recently, Peter Viggo Jakobsen usefully summarised areas for further scholarly work and recommended specific measures that could be taken:

> Our understanding of military coercion would be increased markedly if only coercion theorists would make greater efforts to do three things, namely, (1) provide clear operational definitions of key concepts and variables, (2) engage in systematic and rigorous empirical analysis of generally accepted propositions, and (3) seek to provide solutions to the many policy problems that coercion theorists have identified to date.[48]

In addition, I believe that there are a number of opportunities for scholars to address the following challenges:

- *Expanding Actor-Specific Behavioural Models.* I believe that the sort of actor-specific modelling advocated by Alexander George remains the most fruitful approach to analysing new cases, but the model needs to be systematically expanded to better account for factional influences, collective decision-making, and other similar factors that can help to avoid treatment of adversaries as unitary actors.[49]

- *Integrating Inductive, Deductive, and Statistical Work.* In his recent review of the state of the field, Jakobsen cited a lack of integration of the deductive approach favoured by Schelling and his associates, on the one hand, and the inductive approach favoured by George and his associates,

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48   Jakobsen, 'Pushing the Limits of Military Coercion Theory', p. 153.

49   Both Jakobsen ('Pushing the Limits of Military Coercion Theory') and Jentleson and Whytock ('Who "Won" Libya') encourage an expansion of actor-specific behavioural models to take into account the multiplicity of factional and other influences on adversary decision-making. See Bruce W. Jentleson and Christopher A. Whytock, 'Who "Won" Libya? The Force-Diplomacy Debate and Its Implications for Theory and Policy', in *International Security*, vol. 30, no. 3, Winter 2005/06, pp. 47–86.

and promoted more systematic and rigorous empirical analysis.[50] There appear to ample opportunities to better integrate inductive, actor-specific models work with deductive and formal models, and test the explanatory power of these resulting models using standard statistical techniques.[51]

- *Providing Ways to Identify and Assess Causal Mechanisms that Link Targets to Behavioural Change.* For coercion to work, planners must identify targets to place at risk that will compel an adversary to change his behaviour. This appears to require a more detailed understanding of individual leaders and their key supporters than presently exists.

- *Addressing Measurement Problems.* Another challenge we identified was measurement, including treatment of coercive outcomes in binary rather than continuous terms, and estimation of the benefits, costs, probabilities, and perceptions of the coercive target. Again, expected utility models provide a consistent framework for estimation and analysis that may be helpful in addressing many of these measurement issues.[52]

- *Understanding Bargaining Breakdowns That Lead to Coercive Situations.* When one side in a dispute resorts to force, it is a sign that previous efforts to negotiate a peaceful solution have failed. This presents methodological challenges, insofar as militarised disputes are essentially the result of adverse selection, where we do not understand the path-dependent processes that led to the breakdown of bargaining, and the initiating side's escalation of the dispute to the threat or use of force.[53] Better data and more analysis are needed on the underlying characteristics of disputes,

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50 Jakobsen, 'Pushing the Limits of Military Coercion Theory', pp. 157 and 159–160.

51 In his essay in the *Handbook of War Studies*, for example, Bueno de Mesquita assessed how well his expected utility model did in differentiating between past historical cases of disputes that escalated or did not escalate to war, with impressive results. See Bruce Bueno de Mesquita, 'The Contribution of Expected-Utility Theory to the Study of International Conflict', in Manus Midlarsky (ed.), *Handbook of War Studies*, Unwin Hyman, Boston, MA, 1989, pp. 160–161.

52 This class of models requires identification of a policy issue under contention, the stakeholders that will seek to influence the outcome, and estimates of the preferred outcome on a one-dimensional continuum, the relative capabilities (or clout), and the importance of the issue (salience) to each stakeholder. All other calculations, e.g., perceptual biases arising from risk orientation, incentives to challenge or resist other actors, and so on, are endogenously calculated.

53 Among the works that have sought to address bargaining and war are William Reed, David H. Clark, Timothy Nordstrom, and Wonjae Hwang, 'War, Power, and Bargaining', in *The Journal of Politics*, vol. 70, no. 4, October 2008, pp. 1203–1216; Robert Powell, 'Bargaining Theory and International Conflict', in *Annual Review of Political Science*, vol. 5, 2002, pp. 1–30; and Barbara F. Walter, 'Bargaining Failures and Civil War', in *Annual Review of Political Science*, vol. 12, 2009, pp. 243–261.

both those that escalate to violence, and those that do not, so that we can better understand the origins of coercive situations.[54]

- *Representing the Dynamics of Coercion.* One final challenge we identified in our 1999 report was that coercion theory is not a single-shot game, as it is treated by many scholars, but a dynamic one that can involve efforts on both sides—coercion and counter-coercion—to promote the achievement of their preferred policy outcomes. I believe that non-cooperative game theory in the form of expected utility or agent-based rational choice stakeholder models could be quite useful for such dynamic analyses.[55]

This is, needless to say, an ambitious and challenging agenda for future scholarship. Nonetheless, I believe that it offers some promise that in coming decades we will see increased understanding of the basic phenomenology and dynamics of coercion, and the emergence of better methodologies and tools for helping policymakers and strategists to assess whether a strategy of military coercion is likely to influence an adversary's choices, or whether actually eliminating an adversary's capabilities to resist is likely to be the necessary precondition for realising a favourable outcome.

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54   The principal empirical basis for large-N studies of the use of force is the Correlates of War Project's 'Militarized Interstate Disputes' (MID) data; data on the underlying disputes is needed, however, to better differentiate between the relatively few cases that lead to the threat or use of force from the vast majority that are resolved peacefully, or simmer without recourse to force. Somewhat serendipitously, work that has begun on the Issue Correlates of War (ICOW) data set offers some promise of filling this lacuna. See Patrick James, 'Major Steps Forward in the Scientific Study of War', in *International Studies Review*, vol. 11, no. 3, 2009, pp. 636–637, reviewing Paul D. Senese and John A. Vasquez, *The Steps to War: An Empirical Study*, Princeton University Press, Princeton, NJ, 2008.

55   For example, the expected utility or agent-based rational choice stakeholder models of Bruce Bueno de Mesquita appear particularly relevant to understanding choices of war and peace. See for example: Bruce Bueno de Mesquita, *The War Trap*; 'The War Trap Revisited'; 'The Contribution of Expected-Utility Theory to the Study of International Conflict'; and *War and Reason: Domestic and International Imperatives.*

The Use of Military Force in the Contemporary Security Environment

Dr Benjamin S. Lambeth

As always, it is great to be back in Canberra. It is hard to believe that two years have gone by since my last visit. It is also a treat to see so many of my 'Aussie' mates again and to be hosted again by the RAAF. I am honoured to have been invited to contribute to this proceeding, which definitely sets the standard for excellence in organising these kinds of events.

The topic I was asked to address this afternoon is the use of military force in the contemporary security environment.

It is such a broad-ranging and open-ended subject that I could have picked any number of ways of approaching it. But one has to start somewhere, since otherwise, as the Cheshire Cat said to Alice in Lewis Carroll's *Alice in Wonderland*, 'If you don't know where you're going, any road will take you there'.

If I had been asked to speak on this subject by, say, the Government Department at Harvard or by the Australian National University (ANU), I might have approached it purely as an academic exercise and sought to use recent history as a basis for developing a broad typology of force employment and then suggesting various conceptual pigeonholes into which we might stuff the assorted experiences of the recent past, such as coercive wars, wars of denial, wars of retribution, wars aimed at regime change, and so on—all of which, by the way, have been part and parcel of the various conflicts we have experienced in recent years.

But this is, after all, an air power conference, and you are not here to listen to theorising on this topic, but rather to learn about the more practical teachings that defence professionals, and airmen in particular, might best draw from the recent record of combat experience worldwide.

So, in a spirit of lending some manageable focus to this open-ended topic, I have defined 'the contemporary security environment' as the two-decade stretch of time since the collapse of the Soviet Union and the end of the Cold War in 1991. And I have considered 'the use of force' to include not every clash in recent memory, such as Russia's skirmish with Georgia four years ago, but just those operations that have been dominated by the United States and its allies and by other players of major note around the world.

Looking back over the two decades since the Cold War ended, the United States and its allies have engaged now in five major exercises in force employment, as follows:

- Operation *Desert Storm*
- Operation *Deliberate Force*
- Operation *Allied Force*
- Operation *Enduring Freedom*
- Operation *Iraqi Freedom*

The first of these, Operation *Desert Storm* in early 1991, was a limited and ultimately successful coalition campaign to force Saddam Hussein to withdraw his troops that had occupied and brutalised Kuwait the previous August.

The second one, Operation *Deliberate Force* in the summer of 1995, was also a limited exercise in coercion that entailed 11 days of NATO precision air strikes against Serbian targets in Bosnia-Herzegovina, in the context of the Yugoslav civil war that had first broken out after the death of Tito. It too was a resounding success.

The third engagement, Operation *Allied Force*—NATO's air war for Kosovo in 1999—was likewise a successful coercive campaign, with the intent to compel Slobodan Milosevic to desist from his human rights abuses against the citizens of Serbia's Kosovo province.

Following these three limited and purely coercive precedents, the major combat phases of Operation *Enduring Freedom* against the Taliban and al-Qaeda in Afghanistan in 2001 and Operation *Iraqi Freedom* against Saddam Hussein in 2003 were substantially different, in that they sought, and eventually achieved, the complete take-down of the regimes being fought.

Once those two campaigns devolved into slugfests against the resistance movements that subsequently arose in each country, however, they transitioned into counterinsurgency efforts aimed at actual regime *replacement*. The final outcomes, now less so in Iraq and seemingly ever more so in Afghanistan, remain yet to be fully determined.

In addition to these American and allied conflicts, there was also a little-known but consequential fight by India that was conducted in 1999. It was a 74-day counteroffensive in the Himalayas to drive out more than a thousand Pakistani troops who had surreptitiously occupied a portion of Indian-controlled Kashmir on the Indian side of the Line of Control. This Kargil War, as it was named after the town closest to the fighting, was largely missed in the West because it broke out while the more attention-getting Kosovo campaign was underway. But it too offers

an instructive case study in the use of air power in high-intensity warfare in the post–Cold War era.

Finally, it bears remembering that Israel conducted two coercive wars in Lebanon and Gaza in 2006 and 2008–2009, respectively, with each aimed at forcing the terrorist groups that dominated those areas—Hezbollah in Lebanon and Hamas in the Gaza Strip—to stop firing barrages of rockets into Israel's civilian population centres.

If you divide both *Enduring Freedom* and *Iraqi Freedom* into two separate campaigns, which they really were, to all intents and purposes—the initial major combat phase and then the more prolonged counterinsurgency phase in each case—that gives us a total of nine combat experiences since the end of the Cold War to make sense of. And clearly, if we put our thoughts to it, there is enough of both commonality and uniqueness in these experiences to provide us a rich menu of insights about the use of military force in the contemporary security environment, which is the way I have chosen to take on my assignment for this afternoon.

I will not go so far as to say that I have been in search of fully-fledged 'lessons learned' here, since most such would-be 'lessons' are usually more just identified than actually learned. For true learning to have occurred, the implied prescriptions must first be actually accepted and integrated into a Service's combat repertoire. And such an achievement, as you know, is generally more easily said than done, given the forces of resistance to changing long-established habit patterns.

Also, when it comes to the many pitfalls that abound in seeking definitive conclusions from events like those listed above, I am reminded of a cautionary note offered back in 1991 by Sir Michael Howard that 'history, whatever its value in educating the judgment, teaches no "lessons", and professional historians will be as sceptical of those who claim that it does as professional doctors are of their colleagues who peddle patent medicines guaranteeing instant cures … In short, historians may claim to teach lessons, and often they teach very wisely. But "history" as such does not.'[1]

So, with that qualifier in mind, I would like to use the rest of my time this afternoon to share with you a dozen conclusions about force employment that I have drawn from the campaigns listed above. I have deliberately chosen not to speak about Operations *Odyssey Dawn* and *Unified Protector* over Libya last year, since virtually all of tomorrow will be taken up by those most recent experiences. I would prefer not to try to prejudge what you will hear about them from those who were actually there.

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1   Michael Howard, *The Lessons of History*, Yale University Press, New Haven, CT, 1991, p. 11.

Air Power Will Be a Key Player in Tomorrow's Wars

To begin with, I think it is safe to say from the record of the past two decades that air power will invariably be an important player in tomorrow's confrontations yet to occur.

During Operation *Desert Storm*, it was the *only* show in town for 38 days, until the four-day air-supported ground offensive was finally unleashed to finish the job. Likewise, during both *Deliberate Force* and *Allied Force* in the Balkans, air power was the *sole* combat arm with any active role in those campaigns. I will come back to this and offer some further thoughts on it a bit later.

During the first phase of *Enduring Freedom* in Afghanistan through December 2001, air power and just 300 or so CIA (Central Intelligence Agency) operators and allied SOF (Special Operations Forces) troops allowed the indigenous Afghan Northern Alliance to drive out the Taliban without the need for any significant allied ground presence.

During the major combat phase of *Iraqi Freedom* in March and April 2003, unlike during *Desert Storm* a dozen years before, the air and ground offensives pushed off concurrently. In that campaign, it was the air component, thanks to its unblinking overhead ISR (Intelligence, Surveillance and Reconnaissance) capability, that allowed that high-speed ground advance by assuring ground commanders that their unprotected flanks were secure. That contribution, along with the precision bombing of Iraqi ground forces around the clock and in all weather—even during a three-day sandstorm that brought all other combat operations to a halt—was indispensable in enabling the land component's push from Kuwait to the outskirts of Baghdad within days and then toppling the regime in just three weeks of fighting.

During the more extended counterinsurgency phases of *Iraqi Freedom* and *Enduring Freedom*, the latter of which continues to this day, US Central Command's (CENTCOM's) air component has taken a back seat to ground troops as the pre-eminent force element. Even with that lower profile, however, air power has remained indispensable through its mostly non-kinetic but still key enabling contributions in the roles of armed overwatch, on-call close air support (CAS), inter- and intra-theatre mobility, medical evacuation, and ISR.

Likewise in India's Kargil War in 1999 which started out, much like the US Army's later Operation *Anaconda* in Afghanistan in March 2002, as an attempt by the Indian Army to go it alone. But they soon encountered enough enemy resistance that the Army was obliged to call on the Indian Air Force for help when the going got really rough. Because both the ground and air players in that war had a major hand in driving the invaders out, it is hard to say which force element was the more decisive in the end. As in so many cases of modern warfare, asking that question is

sort of like asking which blade in a pair of scissors is more responsible for cutting the paper.

If you look at just the weight of effort expended, the Indian Army fired nearly a quarter of a million rounds of artillery in 74 days. By contrast, the Indian Air Force only dropped around 500 general purpose bombs, and fewer than a dozen of those were laser-guided bombs (LGBs). So the Army was clearly predominant from a simple weight-of-effort perspective. However, the air contribution was disproportionately influential in its interdiction and psychological roles by cutting off enemy resupply, preventing any evacuation of the enemy's wounded, and demoralising the intruders.

Finally, with respect to the Lebanon and Gaza wars, Israel *led* with air power in its second Lebanon war in 2006, with no significant commitment of ground troops until it became clear to the Israeli Government after the first week that stand-off attacks alone would not produce the desired results.

Looking to the future, it is hard to say what the next test for the United States and its allies might entail. I would say for sure, in the unlikely but consequential event if we were ever to be forced to defend Taiwan for whatever reason, that air power would not only be a central player but would be the *predominant* force element, because of the nature of the challenge we would face in that arena, even though we would hope that commonsense and good judgement would prevail on all sides and prevent the need for that kind of a showdown. There would also be, of course, the tyranny of open-ocean distance that would essentially rule out any significant place for allied ground forces in such a conflict.

But even at the opposite end of the conflict spectrum, at the lower end, with regard to the kinds of land-centric low-intensity challenges that we face in Afghanistan today, the ISR and mobility aspects of air power will continue to be indispensable contributors—just as much in irregular warfare as at the higher end of the conflict spectrum.

So we can say with the certainty of sunrise, I believe, that air power will *always* figure one way or another in the use of force in the contemporary security environment, at least for as far ahead as we can now see. One cannot necessarily say the same in every case for land and maritime power, although they too will figure in some way in most future contingencies.

By the way, please do bear in mind that when I speak of air power, I am referring not just to *air* vehicles and their associated systems, but also the whole spectrum of air, space, information, intelligence, command and control, and cyber adjuncts, all of which are equally important to delivering combat effects in, through and from the third dimension. And also I am not referring just to *air force* air power, but to the contributions of all Services that operate and fight in and from the third dimension.

Although separate and independent air forces continue to exist for a good reason, which is to provide full-spectrum air service with strategic reach and effectiveness, it is important never to forget that air power knows no colour of uniform.

Air Power Alone Can Sometimes Achieve Desired Combat Goals

Second, we have seen from at least two combat experiences since the Cold War's end that air power can achieve desired joint-force objectives all by itself, if the conditions are right (and I would emphasise this last point).

Now, having made that provocative (and, to some, hot-button) statement, let me first preface all else I will say on it by being clear up front that *no* responsible airman in any air force I am aware of has ever proclaimed this to be a general rule about air power, or something that air power development should ever seek as its ultimate standard for performance. I will come back to this important qualification with some further thoughts on it later in my remarks.

But strictly on the facts, one can say in all fairness, in hindsight, that air power essentially *alone* achieved NATO's sought-after objectives in both Operations *Deliberate Force* and *Allied Force.*

In the first case, NATO's 11-day air offensive in 1995 represented a textbook illustration of air power invoked not to 'win a war', but rather to achieve a discrete and limited goal. The result in this case was a successful exercise in coercion. In the end, the Bosnian Serbs caved in to NATO's demands by ceasing their shelling of civilians and withdrawing their heavy weapons from the Sarajevo exclusion zone. More important, NATO's air attacks paved the way for the Dayton Accords that Milosevic signed the following December.

True enough, one must grant that not just air power, but a combination of other factors also played at least an indirect part in driving Serbia's leaders to the negotiating table. Those additional factors included the possibility of a Croatian ground attack and mounting diplomatic pressure, along with associated threats of economic sanctions. But the fact that matters most here remains that it was NATO's precision bombing—with *no* complaints of inadvertent civilian casualties, by the way—that did the heaviest lifting in bringing about the Dayton Accords. Assistant Secretary of State Richard Holbrooke, who negotiated the Accords, later wrote that while it had taken the outrage of the shelling of civilians in Sarajevo to force NATO to launch its offensive in the first place, the carefully measured but effective bombing made a 'huge difference' in bringing about an acceptable outcome.[2]

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2   Richard Holbrooke, *To End a War*, Random House, New York, NY, 1998, p. 104.

One can say the same even more forcefully about NATO's air war for Kosovo four years later. For all its many shortcomings in excessive gradualism and irresolution, *Allied Force* did represent the first time in history when air power coerced an enemy leader to yield with no supporting land involvement whatsoever.

As you all will remember, heated arguments were later joined between airmen and land warriors over the extent to which Milosevic's fear of a possible NATO ground invasion was the main consideration behind his decision to throw in the towel when he did.But the facts remain that:

- the imputed ground threat had virtually no tangible basis by way of actual allied preparations for a ground invasion;

- the bombing of Belgrade could have continued indefinitely, and Milosevic knew it; and

- air power was the only allied force element that actually figured in the campaign from start to finish.

To that extent, one can honestly say that, for the first time in history, the use of air power *alone* forced the wholesale withdrawal of an enemy force from a disputed piece of real estate. On this point, once it became clear that a successful outcome was imminent, British military historian John Keegan, long a sceptic of air power, admitted that the looming settlement represented 'a victory for air power and air power alone'.[3] In accepting that (to him) revelation about air power, he added that he felt 'rather as a creationist Christian … being shown his first dinosaur bone'.[4]

There is even a plausible case to be made that in the first Gulf War as well, allied air operations, had they continued uninterrupted for just a few more days before the planned start of the ground offensive, might also have just possibly swung the outcome all by themselves. I would not press this *too* far, but retired Air Vice-Marshal Tony Mason of the RAF wrote three years after the Gulf War ended that there was at least circumstantial evidence that Iraq's ground troops may already have been preparing to withdraw from Kuwait even before the coalition's ground offensive was under way. As evidence for this, he cited the reported destruction of the Kuwait City desalination plant on an order from Saddam Hussein that had been given a day or two before the ground campaign kicked off.[5] It would be interesting to see if Saddam's interrogation after his capture cast any conclusive light on that question.

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3   Quoted in Elliott Abrams, 'Just War. Just Means?', in *National Review*, vol. 51, no. 12, 28 June 1999, p. 16.

4   John Keegan, 'Modern Weapons Hit War Wisdom', in *The Sydney Morning Herald*, 5 June 1999, p. 17.

5   Air Vice Marshal Tony Mason, RAF (Ret.), *Air Power: A Centennial Appraisal*, Brassey's, London, 1994, pp. 139–140.

Just to close this point out, I want to stress again, most emphatically, that in *no* way should campaign planners *count* on air power being the decisive force element all by itself. General Dani Halutz, the then Chief of Staff of the Israel Defense Forces (IDF), went into Israel's war against Hezbollah in 2006 with that guarded hope in mind, and it soon proved in the end to have been a serious miscalculation.

But the fact is that for major confrontations against mechanised enemy forces, the air weapon has now become so capable and so effective that it offers every promise of doing the bulk of the hard work, yielding a welcome situation in which friendly ground troops no longer have to go head-to-head early on and suffer the casualties that mechanised close combat will almost inevitably entail. I will come back to a variation on this point later on in my remarks.

A Ground Component to Any
Strategy Will Make Air Power More Effective

This brings me to a third conclusion drawn from the conflict experiences of the past two decades, and that is that even though air power has been shown to have the potential for determining combat outcomes all by itself in *some* circumstances, a ground component to any campaign strategy is bound to make air power more effective, whether or not friendly ground troops are actually committed to battle in the end. This point holds true, I would add, even in those cases I have already mentioned in which air power was either decisive all by itself or did most of the heavy lifting towards achieving desired campaign goals.

In the case of *Desert Storm*, the logic behind it was best expressed by the British national contingent commander, Air Chief Marshal Sir Patrick Hine—actually right here in Canberra in this very auditorium at an air power conference nearly two decades ago. He said that, in response to a question from General Norman Schwarzkopf as to whether he personally felt that the coalition's impending air offensive might well have had the desired effect of forcing Saddam Hussein to withdraw from Kuwait without the need for a serious ground push, he had replied that 'air power might well defeat the Iraqis without the need for a ground campaign, but was it sensible to rely on that?' He went on to say, 'Frankly, while I was confident that Allied air power would prove very effective, if not decisive, I felt that the risks of going to war with such an adverse ground force ratio were too high … So I favoured further reinforcement'.[6]

For his part, the US Air Force Chief at the time, General Merrill McPeak, was asked by a reporter after *Desert Storm* ended whether, had the air war been allowed to continue, Saddam's forces might have been compelled to withdraw without the

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6   Sir Patrick Hine, 'Air Operations in the Gulf War', in Alan Stephens (ed.), *The War in the Air 1914–1994: The Proceedings of a Conference Held by the Royal Australian Air Force in Canberra*, Air Power Studies Centre, Canberra, 1994, p. 307.

need for a ground offensive. McPeak replied that, in his own private conviction, *Desert Storm* represented 'the first time in history that a field army had been defeated by airpower'.[7] In a similar spirit, General Chuck Horner, CENTCOM's Air Component Commander during the Gulf War, when asked whether he had hoped that the Iraqis would cave in before a ground push became necessary, replied: 'Of course. I'm an airman'.[8] But he placed little stock in the likelihood of such an outcome, which is why he was such a vocal supporter of the ground campaign plan.

In the more telling case of Kosovo, when allied air power indeed *did* prove to have been the sole force element committed to the fight, General McPeak reflected afterwards—and I think absolutely correctly—that the Clinton administration's having ruled out any involvement of ground troops from the start was 'a major blunder', and he continued:

> I know of no airman—not a single one—who welcomed this development. Nobody said, "Hey, finally, our own private war. Just what we've always wanted!" It certainly would have been smarter to retain all the options … Signaling to Belgrade our extreme reluctance to fight on the ground made it much less likely the bombing would succeed, fully exploring the limits of air power as a military and diplomatic instrument'.[9]

As for the concern voiced by many over the likelihood of sustaining intolerable casualties had NATO chosen to back up its air offensive with a serious ground component, there would most likely have been no need actually to *commit* friendly troops to battle in the end. Just by its implications from simply being there, a substantial forward deployment of combat-ready NATO troops along the Albanian and Macedonian borders would have made their Serbian counterparts more easily targetable by air power by forcing them to bunch up in defensive formations rather than dispersing and hiding, as the absence of a serious ground threat allowed them to do.

I believe it was for that reason—the absence of a serious ground threat—that the air war had almost no effect on the Serbian Third Army that was doing the ethnic cleansing, and that the number of Serbian tanks destroyed by NATO air attacks could almost be counted on one hand in the end. But it did not matter, as going after tanks was not what that war was about. What that war was about was going after Milosevic's core values. Ultimately, it did have a happy ending. But having

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7   Merrill A. McPeak, *Selected Works 1990–1994*, Air University Press, Maxwell Air Force Base, Alabama, 1995, p. 47.

8   Quoted in Thomas A. Keaney and Eliot A. Cohen, *Revolution in Warfare? Air Power in the Persian Gulf*, Naval Institute Press, Annapolis, MD, 1995, p. 79.

9   General Merrill A. McPeak, USAF (Ret.), 'The Kosovo Result: The Facts Speak for Themselves', in *Armed Forces Journal International*, September 1999, p. 64.

had a credible ground component to the campaign strategy would have made for a far more effective air war against Serbia's ground forces. It might have helped deter, or at least lessen, the ethnic cleansing by giving the Third Army a more serious concern to worry about. In so doing, it might also have allowed a quicker end to the campaign.

This suggests an important corrective to the seemingly timeless argument between airmen and land warriors over the relative merits of air power versus 'boots on the ground'. In this case, although Kosovo confirmed that friendly ground troops no longer need to be committed to early combat in every case, it also confirmed that air power, in most cases, cannot perform to its fullest potential without the presence of a credible ground component to the campaign strategy—even if only as a shaper of desired enemy behaviour.

Air Power Will Not Always Be the Pre-eminent Force Element

Fourth, regarding what I just said, I believe it is important for airmen to accept and make peace with the fact that air power will not always be the pre-eminent force element in joint warfare.

If you look back over the 12 years that spanned the first Persian Gulf War and the three weeks of major combat in *Iraqi Freedom* in 2003, that was truly a triumphal time for American and allied air power. By the end of that period, the air weapon had finally matured in its ability to deliver the sorts of outcome-determining results that air power's pioneer proponents had promised in vain, generations before.

The years since that unbroken chain of successes, however, have entailed a different kind of fighting and, as a result, a less front-and-centre role for air power. Since 2003, the sorts of high-end challenges that were presented by the first Gulf War and by the two subsequent Balkan campaigns have been displaced, at least for now, by lower-intensity counterinsurgency operations, in which the air input, while no less important than before as an *enabler* of events, has taken a back seat to ground troops as the most visibly engaged force element.

In the eyes of some, this shift in the character of our latest combat involvements has cast air operations—or at least kinetic air operations—in a seemingly subordinate role. Not only that, I hear from some airman I know that it has had the effect of inclining more than a few younger fighter pilots, who have been exposed to no other form of combat during their brief careers so far, to conclude that their sole purpose in professional life is to support friendly ground troops.

In its most extreme manifestations, this development has led some doubters to ask why we even need separate air forces any more. To cite one recent example, the Israeli military historian Martin van Creveld, who has spoken from this podium at past air power conferences here in Canberra, published a book last year called

The Age of Airpower,[10] claiming that that age has now passed in today's era of irregular warfare. I hope my own remarks this afternoon will reassure you that that judgment was both ill-informed and short-sighted.

If we take a longer view, as we rightly should, and think about air power not just in terms of how it is being used *today*, but in the broader continuum of time, both in the past and in the years ahead, we will quickly see how its relevance to commanders is neither universal nor unchanging, but rather is wholly dependent on the particular circumstances of a situation. More to the point, the fact is that air power can be everything from singlehandedly decisive, as I have indicated before, to all but irrelevant to a joint force commander's needs (other than maybe the ISR part of it) depending on his operational exigencies of the moment.

Because its relative import, like that of other force elements, turns directly on how its offerings relate to a commander's most immediate and pressing combat needs, air power should never disappoint when it is not the main producer of desired results.

Indeed, I would put it to you, as I have often chastised my air power zealot friends, that the idea that air power should be able to perform effectively in all forms of combat, unaided by other force elements, is not only an inappropriate but also an absurd measure of its worth.Worse than that, it is a point of contention that I believe air power's most outspoken advocates, from Giulio Douhet and Billy Mitchell onward, have done their cause a major disservice by misguidedly espousing for so many years.

The result, I am convinced, has been to put airmen needlessly into losing positions in the doctrinal debates by misguidedly claiming for air power in *all* circumstances of conflict performance results that it can only deliver with fullest effectiveness in *some*—if not most. Since when, after all, did *land* power, or any other force element, for that matter, ever decide combat outcomes all by itself?

Although kinetic air employment in today's engagements may have been temporarily overshadowed by more ground-centric forms of fighting, there will surely be future times when challenges yet to arise will again test the world's air forces to the fullest extent of their deterrent and combat potential. Notwithstanding our natural tendency to fixate on the here and now to the exclusion of all else, I would remind you that there is an infinite amount of future in front of us still waiting to present us with new threats of a different order.

As my friend Colin Gray has often pointed out in this regard, just because it has been clear and sunny for weeks on end is no reason for one to discard one's foul-weather gear.

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10   Martin van Creveld, *The Age of Airpower*, Public Affairs, New York, NY, 2011.

It follows from this that context rules in every case and that whether air power should be regarded as 'supported by' or 'supporting of' other force elements is not a question that can ever have an unchanging answer for all time. Rather, the answer will invariably hinge on the unique circumstances at any given moment.

THE CLASSIC ROLES OF AIR POWER
AND LAND POWER HAVE BEEN REVERSED

Turning now to my fifth conclusion, I believe the experiences of both *Desert Storm* and the major combat phase of *Iraqi Freedom* showed that when it comes to major conventional warfare against mechanised opponents like Saddam Hussein's Iraqi Army—and, for that matter, like Iran's and North Korea's Armies today—the classic roles of air power and land power have been reversed when compared to their traditional relationship from World War II through Vietnam.

In this role reversal, it is now *ground* forces that mainly do the shaping and fixing and *air power* that does the killing of enemy troop concentrations rather than the other way around, as it was in World War II and would have been throughout the Cold War with respect to Soviet and Warsaw Pact forces in Central Europe.

This change has been a result, first and foremost, of air power's around-the-clock and all-weather precision stand-off attack capability that has been made possible by the advent of accurate munitions in large numbers and by electro-optical and infra-red sensors and targeting pods, as well as by the synthetic aperture radars and ground moving target indicators on such long-dwell ISR platforms as the E-8 Joint Surveillance Target Attack Radar System (JSTARS) and Global Hawk.

This newly emergent relationship between air- and ground-delivered fires was first displayed during *Desert Storm's* Battle of Al Khafji, when air power singlehandedly shredded two advancing Iraqi divisions by means of precision night stand-off attacks. Those attacks had the effect of putting enemy armies on notice that they can no longer count on a night sanctuary. At the same time, they served notice that any attempt to move *en masse*, whether in daytime or at night, will guarantee a prompt and deadly attack. In so doing, they laid the groundwork for a new role for air power in saving friendly lives by substituting precision air attacks for ground forces within reach of enemy fire.

That, plus the ability of the air war more generally to draw down a well-endowed enemy army to a point where allied ground troops could achieve a virtually bloodless win in just a hundred hours of fighting, made for an unprecedented achievement in the history of warfare.

To clarify on this point, this was not simply a matter of the notional 'hammer' of friendly air power smashing enemy forces against the 'anvil' of friendly ground power. Rather, it was more a case of ground power forcing the enemy to concentrate

his forces in defensive formations, thereby allowing air power to destroy those forces in detail because they were so easily targetable.

We saw the same performance again against Iraq's fielded forces during the three-week major combat phase of *Iraqi Freedom* in early 2003. In a telling testament to this, CENTCOM's Air Component Commander, General 'Buzz' Moseley, in his first meeting with the media toward the campaign's end, said:

> … our sensors show that the preponderance of the Republican Guard divisions that were outside of Baghdad are now dead. We've laid on these people. I find it interesting when folks say we're softening them up. We're not softening them up, we're killing them.[11]

In a ground affirmation of this testament, a platoon leader who was at the leading edge of the Marine contingent's final push to Baghdad, Lieutenant Nate Fick, offered a splendid rendition of what General Moseley was talking about in his book *One Bullet Away*:

> For the next hundred miles, all the way to the gates of Baghdad, every palm grove hid Iraqi armor, every field an artillery battery, and every alley an antiaircraft gun or surface-to-air missile launcher. But we never fired a shot. We saw the full effect of American airpower: every one of those fearsome weapons was a blackened hulk.[12]

Not to put too fine a point on it here, what has largely accounted for this role reversal between land and air forces is that fixed-wing air power has, by now, shown itself to be vastly more effective than ground systems in creating the necessary conditions for rapid success in high-intensity warfare.

To note the most telling testimony to that change, throughout the three weeks of major combat in *Iraqi Freedom*, the Army's V Corps launched only two deep-attack operations with a force consisting of fewer than 80 Apache attack helicopters. The first of those came close to ending in disaster, and the second achieved only modest mission success. By the same token, Army artillery units only expended around 400 of their longest-range battlefield tactical missile, the ATACMS, mainly because of the wide-area destructive effects of that weapon, which made it incapable of meeting CENTCOM's rules of engagement for collateral damage avoidance.

In contrast, the air component during the same time generated more than 20 000 strike sorties, enabled by a force of 735 fighters and 51 bombers. In all, those

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11   Lieutenant General Michael Moseley, 'Coalition Forces Air Component Commander Briefing April 5, 3003', United States Department of Defense News Transcript, 5 April 2003, available at http://www.defense.gov/transcripts/transcript.aspx?transcriptid=2260, accessed 17 September 2012.

12   Nathaniel Fick, *One Bullet Away: The Making of a Marine Officer*, Houghton Mifflin, New York, NY, 2005, p. 289.

aircraft struck more than 15 000 target aim points in direct support of the land campaign.[13]

In light of that experience, I believe it is fair to say that evolved air power in its broadest sense, to include its ISR adjuncts, has fundamentally changed the way the United States and its closest partners might best fight any future large-scale wars through its ability to carry out functions traditionally performed at greater cost and risk, and with less efficiency, by more traditional ground force elements. Most notable in this regard is air power's repeatedly demonstrated ability to neutralise an enemy's army with a minimum of friendly casualties and to establish the conditions for achieving strategic goals almost from the very start of fighting.

Reduced to a bumper sticker slogan, modern air power now allows commanders freedom *from* attack and freedom *to* attack.And that is something very new under the sun in the last 20 years.

For the US, Carrier Air Can
Substitute for Land-based Fighters in Extremis

Sixth on my list of takeaways from the past two decades is the fact that for the United States at least, sea-based strike can, at least in some circumstances, substitute for land-based fighters when needed access to forward land basing becomes problematic.

This is a unique attribute that comes with the US being the world's sole surviving superpower. For only a superpower can develop and sustain such a unique naval force posture. Even with the draconian cost-cutting measures that are now afflicting all of our forces, the nation's leadership remains committed to maintaining 11 deployable large-deck carriers, at least for now. And that will include two new Gerald Ford–class follow-ons to the Nimitz class of carriers that are now under construction (formerly called CVN-21) and scheduled to be commissioned in 2015 and 2020.

For a time after the American involvement in Vietnam ended in 1973, the US Navy's carriers figured mainly in an open-ocean sea control strategy directed against opposing Soviet naval forces. For lesser contingencies, the main purpose of the Navy's carrier battle groups was to provide forward 'presence'.

When it came to actual force employment, however, carrier air power was used only in occasional one-shot demonstrative applications against targets located in fairly close-in areas, like the strikes against Syrian forces in Lebanon in 1983 and Operation *El Dorado Canyon* against Gaddafi in 1986

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13   For amplification, see David E. Johnson, *Learning Large Lessons: The Evolving Roles of Ground Power and Air Power in the Post-Cold War Era*, RAND Corporation, Santa Monica, CA, 2006, pp. 105–135.

True enough, during the 1990s, American naval air also took part in *Desert Storm* and the two Balkan wars, as well as in Operation *Southern Watc*h to enforce the no-fly zone over Iraq for more than a decade. Yet those too were fairly limited operations conducted within easy reach of their targets.

The terrorist attacks of 9/11, however, changed all of that fundamentally. For the US Navy, they created a demand for a deep-strike capability in the remotest part of South-West Asia where the United States had virtually *no* access for forward land-based air operations.

It is a fact, of course, that Air Force bombers also played a big part in the Afghan war, flying from Diego Garcia and, in the case of the B-2, all the way from the United States and back. They dropped nearly three-quarters of all the Joint Direct Attack Munitions (JDAMs) delivered throughout the campaign. Air Force Strike Eagles and F-16s also played a part, albeit in far smaller numbers, after the tenth day once the needed forward basing arrangements had been secured, by flying extremely long-duration sorties (in one case more than 15 hours) from the Persian Gulf.

Nevertheless, during the major combat phase of *Enduring Freedom*, carrier-based fighters operating from the North Arabian Sea and supported by US Air Force and RAF tankers substituted almost entirely for what otherwise would have been a much larger percentage of land-based fighters in other circumstances, simply because of an absence of suitable land bases close enough to make their use sustainable on a regular basis. In all, six carrier battle groups participated in the initial Afghan campaign, with five on station at the same time in December 2001. They conducted around-the-clock strikes against a landlocked country whose southern border was more than an hour and a half's flying time north of the carrier operating areas.

Navy fighters accounted for almost 5000 of the strike sorties flown during that period, making for three-quarters of the total. And the carriers could have generated more had additional sorties been needed to meet CENTCOM's target coverage requirements.

As for the daily flow of carrier air operations, most fighters flew missions lasting four or more hours, with some totalling up to 10 hours in duration. Missions were typically scheduled for two tanker hook-ups during the inbound leg to assigned CAP stations and then two more plugs with a tanker during the return leg to the carrier.

Likewise during the major combat phase of *Iraqi Freedom*, although there was no shortage of shore bases in neighbouring countries this time, American carrier-based fighters still flew nearly half of the more than 20 000 strike sorties flown by coalition forces in all, much in the same manner as over Afghanistan the year

before. These sorties ranged at times to the northernmost reaches of Iraq on missions that lasted sometimes as long as 10 hours, with multiple refuellings.

It offers a clear testament to the nation's continued superpower status that no other navy could have turned in such a performance.

Effects-based Operations
Are More Productive Than Attrition Strategies

My seventh conclusion from the past two decades is that effects-based operations are likely to be more productive in achieving desired results than simple brute-force attrition strategies.

Let me first be clear on what I am talking about here. 'Effects-based operations' have been widely misunderstood. They have also been a lightning rod for a lot of needless friction between airmen and land warriors, since it is been airmen who have mainly been responsible for developing and applying the construct.

We saw this in the United States a few years ago when the four-star Marine Corps commander of Joint Forces Command decreed summarily that any future reference to the concept was to be outlawed in his command because it allegedly failed to understand the realities of combat and offered a pseudo-scientific approach to planning that was not just inappropriate but misleading. In my humble personal opinion, that dismissal totally misunderstood what the concept is actually all about.

Reduced to basics, effects-based operations could not be simpler in their essence. In effect, they are just an intellectual way of tying tactical actions to desired strategic results. Or, more to the point, measures undertaken to ensure that military goals and combat actions aimed at achieving them are relevant to a commander's bottom-line strategic needs. They are *not* about inputs, such as the number of bombs dropped or targets attacked, or simply about breaking things and killing people indiscriminately. Rather, effect-based operations are about *outcomes* having to do with desired enemy behaviour.

In this respect, they serve to remind commanders to stay focused on their desired *results*, rather than falling into the trap of believing that the most easily quantifiable *inputs*, such as the number of sorties flown per day or tons of bombs dropped, offer a measure of anything other than simple weight of effort.

Effects-based operations are also, as often as not, about second-order results rather than first-order results. A classic illustration is the selective bombing of enemy assets to induce paralysis or to inhibit their freedom of use, rather than just attacking them to achieve some predetermined level of destruction.

For example, in *Desert Storm*, the defence suppression campaign was able to neutralise Iraq's radar-guided surface-to-air missiles (SAMs) not by physically destroying them all in detail, but rather by intimidating their operators to a point

where they were deterred from emitting with their radars, which would just invite a HARM (High Speed Anti-Radiation Missile) attack.

That same approach worked again during the Kosovo campaign and in the SAM suppression effort during the major combat phase of *Iraqi Freedom*. Likewise, in its attacks against Iraqi ground forces, both in *Desert Storm* and again in 2003, allied air power showed the potential for defeating an army through *functional* effects rather than through a more classic drawdown by way of attrition.

During the counter land portion of *Desert Storm*, that potential was best reflected in what came to be called 'tank plinking' by F-111s during night attacks against buried Iraqi tanks using 500-pound laser-guided bombs. That novel tactic was the by-product of a discovery during the *Desert Shield* build-up that tanks stood out on the F-111's infra-red sensor display between sunset and midnight because the rate of heat dissipation from the tanks was slower than that of the surrounding sand—even if the tanks were buried up to their turrets under the sand. All the F-111's Weapon Systems Officer (WSO) needed to do was to put a laser spot on the heat source for his bomb to guide on, and the tank was effectively destroyed.

The impact of that tactic, as many of you will remember, was profound. Before, the Iraqis thought they could survive the air war by digging in during the day and massing only at night. However, this 'tank plinking' capability showed that if armies dig in, they still die. The effect on Iraqi behaviour was to heighten the individual soldier's sense of futility. Many tanks were simply abandoned once it became clear that they could turn into death traps without warning.

Viewed at the individual shooter-to-target level, 'tank plinking' may have seemed only 'tactical' to the casual observer. Yet, as a concept of operations, it was most definitely strategic in its consequences. The peak kill rate it allowed was over 500 tanks a night, and it remained above that rate for several nights in a row. In past wars, such targets would have been pretty much unthreatened by aerial attacks.

During *Iraqi Freedom* 12 years later, this use of mass precision was actually driven by conscious effects-based thinking for the first time as campaign planners sought specific results and not just the achievement of some arbitrary level of destruction.

Just to close out this point, we saw the same phenomenon at work during India's 1999 Kargil War. Although the Indian Air Force did not consciously pursue effects-based operations, its attacks against Pakistani troop positions did produce important second-order results that bore heavily on Pakistan's ultimate decision to withdraw, especially toward the endgame once LGBs were used for the first time. Especially after the LGB attacks, Indian targeting pod imagery showed enemy troops abandoning their positions at the very sound of approaching fighters.

My bottom-line point here is that targeting for effects offers a pay-off far greater than simply going for attrition for its own sake. This is not rocket science; it is just common sense with a highfalutin name—effects-based operations.

COERCIVE STRATEGIES WORK BEST
WHEN GOALS AND EXPECTATIONS ARE CONTROLLED

As for my eighth of a dozen offerings to you, I believe it is a safe conclusion from the record of the last two decades that coercive strategies work best when goals are reasonable and expectations are well managed.

My former RAND colleague Eric Larson has already spoken on air power as a coercive tool. Let me just cite a few illustrations of this point to amplify a bit from recent experience on some of the things Eric said.

It helps to have limited and achievable goals in seeking coercive outcomes. I believe one of the reasons why *Desert Storm* was so successful as a coercive operation was because it sought the limited goal of persuading Saddam Hussein to withdraw his forces from Kuwait. It did not seek to bring down Saddam, to force him to give up his WMD effort, or anything more extravagant along those lines.

As the first President Bush and his National Security Advisor, Brent Scowcroft, later wrote in their memoirs, 'Had we gone the invasion route, the United States could conceivably still be an occupying power in a bitterly hostile land'.[14] I suspect they had no idea at the time how prescient that observation was.

Likewise with *Deliberate Force* and *Allied Force* in the Balkans, NATO's air strikes sought solely to get Milosevic to back down from his persecution of innocent civilians. They did not go after more ambitious goals, like insisting that he step down from power or anything of that magnitude.

Perhaps the best recent example of where sought-after coercion did *not* work, or at least did not work to the fullest extent desired, can be seen in Israel's second Lebanon war in July and August 2006. That war, which Israel launched in response to a surprise incursion by a Hezbollah snatch team into northern Israel that resulted in the abduction of two Israeli soldiers, ended up being the IDF's most inconclusive combat performance ever, in that it was the first time a major force commitment ended without a clear victory on Israel's part.

After the campaign got under way, Prime Minister Ehud Olmert declared in a speech to the Parliament six days later, almost as a throwaway line, and clearly with no prior deliberation, that his Government's goals included an unconditional return of the two kidnapped soldiers and a crushing of Hezbollah as a viable force in southern Lebanon. As it turned out, those extravagant goals were unattainable by *any* military means that Israeli and international opinion would be likely to countenance, let alone by air power. And not surprisingly for that reason, they remained elusive throughout the 34 days of fighting.

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14   George Bush and Brent Scowcroft, *A World Transformed*, Alfred A. Knopf, New York, NY, 1998, p. 489.

Once Olmert declared getting the soldiers back as his goal, all Hezbollah's leader Hassan Nasrallah had to do was just to refuse to return them and he could claim victory, which he did. He masterfully controlled the narrative as the dust was settling.

For his part, the IDF's Chief, General Dani Halutz, wanted to teach Hezbollah a lesson they would not forget, which was fine enough as far as it went. There was nothing wrong in principle with the Government's decision to respond to Hezbollah's provocation with escalated force. Yet the IDF's response was not fully explored in all its ramifications before being unleashed. As a result, the IDF launched headlong into its counteroffensive without having given enough thought to the likely endgame and to a suitable strategy for ending the campaign on a high note.

The biggest problem that tarnished the *appearance* of Israel's performance throughout the campaign was the asymmetry between the exorbitant goals initially declared by the Prime Minister and the unwillingness of his Government to pay the price needed to achieve them. Not only did those goals get progressively ramped down as the campaign slogged along, they created initial public expectations that had no chance whatever of being fulfilled. Had the declared goals been more modest and achievable *before* the campaign was fully launched, Israel's second Lebanon war might have ended with an appearance of greater success.

As for the good news here, the IDF two years later conducted a more satisfactory campaign against Hamas in the Gaza Strip that was disciplined by the more limited and realistic goal of forcing Hamas to quit firing rockets into Israel's population centres, and nothing more than that.Although the situation on that front has recently heated up again with more rocket firings during the past few months, Israel's Gaza campaign at the time achieved its avowed goal. In so doing, it went far towards restoring Israel's stock of deterrence that had been pretty badly depleted by the IDF's less impressive performance in 2006.

If the Intent is Regime Change, Simply Preparing for Combat Will Not Suffice

To turn now to my ninth conclusion, the experience of *Iraqi Freedom*, in particular, should have taught us that if a campaign's goal is to be regime change, then simply planning for major combat towards a successful take-down of the existing regime will not, in and of itself, suffice towards bringing that goal about.

This was the lesson most vividly driven home by the Bush administration's badly under-resourced going-in strategy for toppling Saddam in 2003. Whether or not one believes that going to war against Iraq was the right thing to do in the first place, the overwhelming consensus today is that the administration's plan failed completely to anticipate and hedge against the needs of post-campaign stabilisation.

In so doing, it ignored the most fundamental principle of democratic nation-building put forward by Professor Samuel Huntington at Harvard more than four decades ago,[15] which is that an indispensable precondition of successful political modernisation must be the establishment and nurturing of effective institutions of state governance.

True enough, the toppling of Saddam's regime had the welcome effect of ending not only the iron rule of an odious dictator, but also a situation that had made for a decade-long American and British presence in South-West Asia to enforce the no-fly zones over northern and southern Iraq since the end of *Desert Storm*.

However, the flawed way in which that goal was pursued taught us once again that no plan, however elegant, survives initial contact with the enemy. More important, it reminded us—or should have reminded us—that any truly complete strategy for a regime take-down must anticipate and duly plan against the most likely political hereafter, in addition to just seeing to the campaign's needs through the major combat phase.

On this point, back in 2006, Frederick Kagan of the American Enterprise Institute in Washington spotlighted what he called 'the primacy of destruction over planning for political outcomes' that had prevailed up to that time in American military thinking since *Desert Storm*. That focus, he wrote, had led to 'a continuous movement away from the political objective of war toward a focus on [merely] killing and destroying things'.[16] This was best reflected, he said, in the label 'Phase IV',[17] which was the anticipated follow-on to the major combat phase of *Iraqi Freedom*, called 'Phase III'.

That characterisation treated postwar stabilisation almost as an afterthought to the 'decisive operations' that had come to be thought of by US planners as the main mission for which to be prepared.

(Phase I, by the way, was the initial campaign planning, and Phase II was the flowing of forces to the impending war zone.)

That approach worked fine for *Desert Storm* and for the two Balkan wars, which were limited efforts aimed at coercing desired behaviour but not at the more demanding goal of removing one regime and replacing it with another.

However, as Kagan argued, if our combat involvements in the future are going to continue to be directed toward regime change, as was clearly the case

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15   Samuel P. Huntington, *Political Order in Changing Societies*, Yale University Press, New Haven, CT, 1968.

16   Frederick W. Kagan, *Finding the Target: The Transformation of American Military Policy*, Encounter Books, New York, NY, pp. 358–359.

17   ibid, pp. 369–370.

in Afghanistan and Iraq, then the first concern should be determining what the end-state is going to look like and duly planning for it *ahead* of time, since bringing down an incumbent leadership is only a buy-in condition for achieving the ultimate goal. That means that 'Phase IV', or whatever we are going to call the regime replacement activity, is not subordinate to, or even equal to, 'decisive operations'. It must *predominate* in campaign planning.

Beyond that, we might well have duly learned also from our decade-long experience in Afghanistan and Iraq that being in the regime-change business in the first place is something best avoided in principle altogether unless contingent circumstances absolutely allow no alternative.

Mission Creep Generally Comes at a High Price

Turning now to my tenth conclusion, it struck me in reviewing my past writings on Lebanon and Afghanistan that mission creep generally comes at a high price.

That was certainly the main lesson Israel took away from its war against Hezbollah in 2006, when it initially struck back almost reflexively in response to Hezbollah's border provocation on 12 July, but without any clearly defined goals.

At first, the IDF's intent was simply to deal Hezbollah a harsh blow by way of punishment for its provocation. During the first few days of its response, which basically consisted of stand-off air and artillery attacks against preselected targets, the Olmert Government gave little systematic thought to *why* it was engaged against Hezbollah or to what it hoped to gain from its reprisal.

Then, on Day Six, as I mentioned before, Olmert declared in a speech to the Knesset, almost in passing—and definitely without any evident prior deliberation among his cabinet—that his goal was to get the two abducted soldiers returned unconditionally and also to crush Hezbollah once and for all as a viable fighting force in southern Lebanon.

That declaration instantly put Olmert and the IDF's chief, General Halutz, in a de facto divergence of avowed goals for the rest of the campaign, since Halutz rightly understood from the start that getting the soldiers back was a practical impossibility, and that dismantling Hezbollah in southern Lebanon would be far too costly to be worth pursuing. It also gave rise to expectations among Israel's rank and file that predictably set the country up for an appearance of having lost once it failed to achieve that goal.

Ultimately, the UN-brokered ceasefire that was arrived at 34 days after the war started brought an end to Hezbollah's rocket barrages into Israel that had persisted without relief up to that point.So to that extent, Israel *did* achieve something for its effort. But it did not produce an immediate return of the soldiers, as demanded. And it also left Hezbollah intact to fight another day.

That less than ringing outcome left Israel with a clear appearance that it had promised more than it could deliver and had thus gone to war in vain.

In much a similar way, we Americans and our NATO allies have increasingly had a comparable experience in Afghanistan throughout the past decade, ever since the major combat phase ended in early 2002.

As you will remember, we went into Operation *Enduring Freedom* in October 2001, less than a month after the terrorist attacks of 9/11, with the limited goal of destroying al-Qaeda's base of operations and driving out the Taliban who had given bin Laden safe haven. In less than three months of largely air-enabled ground fighting waged by indigenous Afghan forces with the aid of small allied SOF teams, that limited goal was decisively achieved.

There also was an implied notion that by bringing down the Taliban, that would pave the way for a democratic alternative to take root over time with the establishment of a successor regime under Hamid Karzai. But that outcome was never the campaign's going-in intent. The driving goal at the time was simply to smash al-Qaeda and to unseat the Taliban.

Once that goal was achieved, the United States turned its attention to Iraq, with all the cascading negative consequences both there and in Afghanistan that we have seen unfold over the years since.

Sure enough, once the second Bush administration took its eye off the ball in Afghanistan, the Taliban saw an opportunity to regenerate from their new sanctuary in Pakistan and to make a bid to regain control in Afghanistan. In response, what was once a narrow American effort to deal a death blow to al-Qaeda's presence in Afghanistan somehow metamorphosed into a NATO-led counterinsurgency campaign that has made for our longest war ever. This was not a mission that was pursued with any planning aforethought. It just happened.

A decade later, I believe it is the consensus today, even among most uniformed professionals I know, that that effort has been an utter failure to date, or at least one going nowhere any time soon and that has come at a terribly high price.

In a talk to a group in Washington in April 2012, former US Air Force Chief of Staff General Ron Fogleman summed up this viewpoint nicely when he said point blank, in response to a question from the audience, that:

> The American public's patience for this war is over … It was a dream that you could take an area of the world that wasn't a functioning country and turn it

into a functioning country on the timelines required to satisfy the American public. [It] just wasn't going to happen.[18]

And for that, we can thank uncontrolled mission creep in substantial part. There should be a lesson in this for us all.

Another American airman, General Mike Loh, a former commander of Air Combat Command, suggested just a couple of weeks later that one sensible solution to the problem created by this mission creep would be simply to recognise the mistake made and turn the clock back to the original goal that took us into Afghanistan in the first place.[19] I suppose people can debate the merits of General Loh's alternative solution. But it does remind us of the sure-fire remedy that we often offer our kids when they find themselves in predicaments: 'What's the first thing you need to do when you find yourself stuck in a hole? Quit digging!'

Air Power Can Never be More Effective than the Strategy it is Intended to Serve

Coming to the end of my remarks, I would offer as my eleventh takeaway from the campaigns of the last two decades that air power, or *any* force element, for that matter, can never be more effective than the strategy it is intended to serve.

This teaching was first driven home most vividly in the early wake of NATO's air war for Kosovo. And it was best summed up by the commander of US operations in the campaign, Admiral Jim Ellis, who commanded Allied Forces South at the time. In commenting on what airmen and others should take away from the experience, he declared, in a post-campaign briefing to senior leaders in the Pentagon, that *luck* played the main role in ensuring the air war's success.[20]

More to the point, he charged that NATO's leaders 'called this one absolutely wrong' and that their failure to anticipate what might happen after their initial reliance on hope that just a few nights of bombing might lead Milosevic to cave in proved wanting led directly to most of the downside consequences for the alliance that ensued thereafter. Admiral Ellis concluded that the need for consensus within NATO had resulted in an incremental war rather than more decisive operations. He also remarked that excessive concern over avoiding collateral damage had created both sanctuaries and opportunities for the enemy that were successfully

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18 General Ronald Fogleman, USAF (Ret.), in an address to an Air Force Association group in Washington on 11 April 2012, quoted in John A. Tirpak, 'The Patience Reservoir', in *airforce-magazine.com*, 13 April 2012.

19 General John Michael Loh, USAF (Ret.), 'Stop Terrorists with More Airpower', letter to the editor, *Wall Street Journal*, 25 April 2012.

20 Elaine M. Grossman, 'For U.S. Commander in Kosovo, Luck Played Role in Wartime Success', in *Inside the Pentagon*, 9 September 1999.

exploited. And he added that the absence of a credible NATO ground threat probably made the air war last longer than needed to achieve its goals.[21]

The importance of a well-founded strategy was again highlighted by the rude awakening the Bush administration experienced when the seeming pushover of the major combat phase of *Iraqi Freedom* mutated within just days into an ugly insurgency and sectarian struggle that dominated the headlines for six years until the implementation of an appropriate counterinsurgency strategy finally began showing results that got us to where we are today.

And it was dramatised yet again when Israel overreached in its initial goals in Lebanon in 2006, as I just described, and picked a strategy that relied entirely on stand-off attacks, at least at the outset. As the campaign wore on, the IDF's leadership knew full well that air and artillery strikes alone would not bring an end to Hezbollah's retaliatory rocket fire into northern Israel. Nevertheless, there was a widely felt compulsion to keep putting off the move to a ground war for as long as possible.

The main problem with the Government's strategy was the disparity between its initially expressed goals and the IDF's actual combat capability, most notably against Hezbollah's Katyusha rockets, which was basically nil short of a ground invasion to the Litani River to actually find and destroy them. A related problem entailed not defining more attainable goals at the campaign's start and then applying more aggressive measures to yield a more positive result.

All of that made it easy for Nasrallah to boast after the ceasefire went into effect that he had won a 'divine victory', as he called it, just by virtue of having survived.

In the case of Gaza two years later, the Olmert Government did a better job of controlling expectations by working especially hard to ensure that the operation against Hamas would be as brief as possible once it was under way. It also took care this time to set realistic and attainable goals, rejecting temptations to seek a regime change in the Gaza Strip, to disarm Hamas once and for all as a fighting force, or to reoccupy the area with an open-ended troop presence.

The moral of these three examples I have given you is that, in the end, effective strategy and responsible goal setting trump combat prowess every time.

We Do Not Get to Pick our Wars

Last among my dozen conclusions from the past two decades is the simple fact that we do not get to choose the fights we engage in.

This may strike you as a blinding flash of insight into the obvious once you think about it, but it bears remembering all the same.

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21   ibid.

As far back as the days of the Prussian General Staff, Clausewitz warned of the danger of confusing the war we are in with the one we would like to be in. But we have also seen cases time and again more recently of how the combat situations that defence leaders have actually had to deal with were ones that the scenario writers somehow forgot to include in their predictions.

Desert Storm was just the first of such examples. At the time Saddam was gearing up to annex Kuwait, the United States was still fixated on the worst-case scenario of a head-to-head showdown against a wall of Warsaw Pact armour in Central Europe. And our forces were configured and fielded mainly to meet that combat challenge.

Had any self-respecting American analyst predicted in July 1990 that, within six months, the nation would be at war in the Persian Gulf in its most high-technology fight since Vietnam, he would have been dismissed as an eccentric threatmonger.

By the same token, had an F-111 pilot who had trained up to that time almost entirely for high-speed, low-level ingress through echeloned Warsaw Pact defences to attack an airfield in East Germany briefed his Weapons School class on a proposed new tactic that envisaged dropping LGBs on enemy tanks in the desert 1v1 from medium altitude at night, he would probably have been laughed out of the room.

Fast-forwarding to four years later, NATO's first-ever combat operation in Europe was triggered not by Soviet malfeasance, against which we had long planned and trained, but rather by the Balkan civil war that erupted in the early 1990s as a result of the breakup of Yugoslavia after the death of Tito in 1980. Both *Deliberate Force* in 1995 and *Allied Force* in 1999 were unanticipated responses to that late-arising and totally contingent development.

We can say much the same about the other conflicts of the last decade that I have discussed. Operation *Enduring Freedom* stemmed entirely from the terrorist attacks of 9/11, which, as we all remember, came completely out of the blue.

For its part, India's Kargil War two years before was a totally improvised response to a surprise Pakistani incursion that bordered on shock to the Indian Government. And Israel's showdown with Hezbollah was likewise an impromptu response to a surprise border provocation at a time when the IDF's attention had been focused entirely on the Palestinian *intifada* that had taken root in the occupied territories since 2000.

Of course, we can say that the major combat phase of *Iraqi Freedom* was anything but a surprise, since the Bush administration had been planning it for more than a year before the first bomb fell. But for sure, the insurgency that arose in its wake and that consumed us for six years thereafter was something we had not planned for, even though more than a few smart people saw it coming.

And NATO's Libya campaign of 2011 was likewise something no-one could possibly have foreseen, since it was a response to the 'Arab Spring' that erupted out of nowhere earlier last year.

Back in 2008, Secretary of Defense Robert Gates came down pretty hard on the US Air Force by insisting on a total concentration of effort toward the here-and-now demands of supporting our current counterinsurgency (COIN) wars, which he contrasted with an alleged Air Force preference for remaining 'stuck in old ways of doing business,'[22] as he put it, by pursuing its fifth-generation F-22 as its main force development priority. For his part, Gates's inclination was to regard preoccupation with tomorrow's threats as being infected by what he dismissed as 'next war-itis.'[23]

Today, we have new leadership in the Pentagon and new defence guidance that charts a different future than what we have been used to for the last eight years. In his cover letter to that guidance, Secretary of Defense Panetta stressed that tomorrow's American defence posture will emphasise the Asia-Pacific region. The guidance also declared that henceforth, the American defence enterprise will shift 'from an emphasis on today's wars to preparing for future challenges.'[24]

If that can be taken at its word, it tells us that 'next-war-itis' is finally back in business again; as it well should be, which is good.

But as right as it may be in principle for the United States to swing its main attention to the Asia-Pacific region today, we still live in a world in which challenges can come from anywhere. On the other side of the planet, Syria has been aflame with internal resistance against Assad's regime for nearly a year. Israel, which borders on it, has understandable concern over Iran's nuclear ambitions— plus a determination to do something about them decisively should worse come to worst. And for their part, Hezbollah and Hamas have accumulated enough short-range rockets from their Syrian and Iranian providers (more than 70 000 now) to make life intolerable for Israel should another round of attacks on it emanate from Lebanon and the Gaza Strip.

Any of these tinderboxes could potentially lead to future American combat involvement of one sort or another, irrespective of our desire to fixate now on the Asia-Pacific region.

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22 Secretary of Defense Robert M. Gates, 'Remarks to Air War College', speech given to Air War College at Maxwell Air Force Base, Alabama, 21 April 2008, available at http://www.defense.gov/speeches/speech.aspx?speechid=1231, accessed 20 August 2012

23 Secretary of Defense Robert M. Gates, 'Remarks to the Heritage Foundation', speech given to the Heritage Foundation at Colorado Springs, Colorado, 13 May 2008, available at http://www.defense.gov/speeches/speech.aspx?speechid=1240, accessed 20 August 2012

24 US Department of Defense, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*, January 2012, available at http://www.defense.gov/news/Defense_Strategic_Guidance.pdf, accessed 20 November 2012.

My final point here, and I will leave you with this thought, is that if the United States is to remain true to its determination to preserve its status as the world's sole surviving superpower, then we will have no alternative but to keep our forces capable across the entire spectrum of conflict, in light of the persistent fact that we lack the luxury of picking either our fights or our preferred mode of fighting.

To my mind, that is the mother of all realities we face in our security planning, both today and for the future as far out as we can see.

Conclusion

What I have just shared with you is a first-cut overview of how best to make sense of what we should have learned from the past two decades about the use of force in the contemporary security environment.

It was prompted by my assigned topic for this conference, and it remains very much an unrisen soufflé. No doubt with deeper study and more reflection, I could derive more rules of thumb like the ones I have just offered, and also develop further the ones I have come up with so far.

But for now, I hope the insights I have just shared have provided you some useful food for thought. I will try my best to answer any questions you may have during the discussion session.

Ethics, Air Power and Coercive Diplomacy

Dr Christian Enemark

Introduction

From 1911 to 1912 the Kingdom of Italy fought a war with the Ottoman Empire over territory known today as Libya. On 23 October 1911 the commander of the Italian Aviation Battalion, Captain Carlo Piazza, made history's first military reconnaissance flight near Benghazi in a Blériot XI monoplane. In the week that followed, Second Lieutenant Giolio Gavotti carried out the first aerial bombardment mission, throwing four handheld bombs out of his cockpit onto two Turkish-held oases.[1] A century later, in April 2011, the President of the United States authorised the deployment to Libya of unmanned Predator drones armed with Hellfire missiles. Air power technology and ways of applying it have advanced steadily over the last hundred years, but there has been an enduring concern—on the part of civilians and warriors alike—that the use of force should be driven not only by what is possible but also by what is permissible. With so much humanity at stake in the threat and use of force, military action has long attracted the attention of theologians and philosophers. Today, notions of a Just War live on in international laws of armed conflict and in political and moral debates over why, where and how force should be used. The use of air power, which has been highly favoured in strategies labelled 'coercive diplomacy', potentially raises some important questions concerning the strategic wisdom and ethical virtue of restraint. This paper outlines the ethics of war in the context of air power, identifies tensions inherent in the strategy of coercive diplomacy, and discusses some potential ethical dilemmas arising from air-powered 'limited war'.

Ethics, War and Air Power

A useful tool for ethical assessment is the centuries-old and constantly-debated legitimisation framework known as the Just War tradition. This framework includes, but is not restricted to, international legal rules on the use of armed force. The fundamental principle underlying Just War thinking is that, as war inevitably brings much death and destruction, the burden falls on those who

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1   Alan Gropman, 'Aviation at the Start of the First World War', U.S. Centennial of Flight Commission, available at http://www.centennialofflight.gov/essay/Air_Power/Pre_WWI/AP1.htm, accessed 27 April 2012.

favour the use of force to explain why it is morally justified. Ethics is constitutive of the practice of war as a form of lethal violence that is distinguishable from and perhaps superior to other forms. These include violence used for law enforcement (e.g. capital punishment) or for criminal purposes (e.g. murder). This is not to say that war always and necessarily appears morally distinguishable from these things, but rather that the Just War tradition creates moral space for war to be fought justly. There are two main strands to the Just War tradition: *jus ad bellum* (the justice of going to war) and *jus in bello* (the just conduct of war).[2] The first encompasses a set of principles governing the resort to armed force: such action must have a just and proportionate cause, it must be properly authorised and motivated by right intention, it must have a reasonable prospect of success, and it must be a last resort.[3] The second set of Just War principles, governing the conduct of hostilities, establishes an ethical requirement that force be used only in a manner that discriminates between combatants and non-combatants, and that generates harm (including unintended non-combatant deaths) that is proportional to the expected military benefit. It is important, however, to acknowledge the relationship between rules for the conduct of war and rules for going to war. For example, ethical transgressions committed in the course of war can be perceived as all the worse if the ethical foundation for going to war was dubious to begin with. Thus many Iraqis might have felt that prisoner abuses perpetrated by US military personnel at Abu Ghraib prison were an insult, but an insult added to the injury of an apparently unjust invasion of their country. As another example of the relationship between *jus in bello* and *jus ad bellum*: if would-be users of force were highly sensitive to the likelihood of excessive civilian fatalities (a potential breach of the discrimination principle), they might feel less inclined to wage war in the first place.

Against the Just War approach, a pacifist might argue that any use of force is regrettable and that in-depth discussion of ethical rules serves only to sideline non-violent alternatives to the use of force. However, among those analysts and practitioners of war who believe resort to some form of force is necessary and legitimate in some situations, the issue for debate is how harmful that force should be. A realist might find common ground with a pacifist by arguing that ethics and war do not or should not mix. Yet strategy and ethics are arguably inseparable, especially in circumstances where perceptions of right and wrong can be of immense strategic significance. Indeed, there is value both inherent and instrumental in using force justly. Adherence to the conventions of civilised warfare is important for its own sake, and it is important in any strategic contest in which the support of a domestic and/or foreign population is the prize. The

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2   Some analysts also address a third strand: *jus post bellum* (justice after war, or 'just peace').

3   See Paul Christopher, *The Ethics of War and Peace: An Introduction to Legal and Moral Issues,* Prentice Hall, Englewood Cliffs, NJ, 1994, pp. 87–96.

ethicist Michael Walzer has argued that 'one of the things most of us want, even in war, is to act or to seem to act morally.'[4] And the strategist Colin Gray has observed that 'it does not pay strategically to be ethically challenged.'[5] Although moral virtue does not guarantee success, paucity thereof can undermine a political project that requires the threat or use of organised violence.[6] Politics aside, adherence to a code of ethics is also an indispensable characteristic of the military profession. In no profession save the military is killing and being killed integral to the purpose of that profession, but the military aspires to distinguish itself by using violence only in a manner that complies with civilised norms. The warrior ethos, described by H.R. McMaster as the basis of 'a covenant that binds' military professionals to one another and to the society they serve,[7] is an ethos of restraint rather than excess.

In its early years, air power was often advocated as a mode of restrained warfare that could reduce the overall duration and suffering of war. In the United States, for example, Brigadier General William Mitchell argued in 1925 that using an independent air force to attack an enemy nation's industrial and economic works would benefit not only his own country but also the enemy nation. According to Mitchell, the benefits of air power would be the avoidance of costly land battles (such as those seen in World War I), the shortening of wars by attacks on the heart of the enemy nation instead of its military forces, and ultimately the saving of much blood and treasure on both sides. In other words, air power was supposed to give rise to a new and more humane type of warfare.[8] World War II demonstrated, however, that any form of warfare can be exercised in an unrestrained fashion if the political will to do so is present. The British Air Chief Marshal Arthur Harris directed the strategic bombing of German cities by RAF Bomber Command, from February 1942 until the end of the war, because his government thought it necessary. But there was a sense afterwards that 'what he had done was ugly', and Walzer reports that there seemed to have been 'a conscious decision not to celebrate the exploits of Bomber Command or to honor its leader.'[9] It was at the end of this conflict that the potential horror and inhumanity of air power reached its zenith, when the Enola Gay dropped an atomic bomb on the Japanese city of Hiroshima. This event, as well as the large-scale conventional bombing campaigns

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4   Michael Walzer, *Just and Unjust Wars: A Moral Argument with Historical Illustrations*, 4th ed., Basic Books, New York, NY, 2006: p. 20.

5   Colin S. Gray, 'Moral Advantage, Strategic Advantage?', in *The Journal of Strategic Studies*, vol. 33, no. 3, 2010, pp. 333–365, at p. 358.

6   Gray, 'Moral Advantage, Strategic Advantage?', p. 360.

7   Brigadier General H.R. McMaster, 'Remaining True to Our Values – Reflections on Military Ethics in Trying Times', *Journal of Military Ethics*, vol. 9, no. 3, 2010, pp. 183–194, at p. 193.

8   Gian P. Gentile, 'Beneficial War', in *Harvard International Review*, 24 December 2011, available at http://hir.harvard.edu/india-in-transition/beneficial-war-0, accessed 29 April 2012.

9   Walzer, *Just and Unjust Wars*, p. 323.

that had preceded it, later generated the moral and political impetus after the war to revisit the international rules of war. After the war, *jus ad bellum* principles found new life in provisions of the 1945 Charter of the United Nations, and *jus in bello* principles were enshrined in the 1949 Geneva Conventions.

Today, in a modern air force serving a democratic country, air power doctrine is replete with references to Just War principles and their parallels in current international law. The document *Operations Law for RAAF Commanders* states, for example, that 'The manifestation of Australia's national will through the projection of air power, *in accordance with the law*, is an integral part of the RAAF mission'.[10] The RAAF's *Air Power Manual* repeatedly characterises war and ethics as being inextricably linked to each other and to professional service to the nation. It notes, for example, that 'The people of Australia, the ADF and the Air Force have an enviable reputation for fairness, honesty, integrity and respect for the rule of law', and it warns that 'Air power can create devastating effects, and failure to use this power with discrimination and proportionality can have serious adverse consequences'.[11] Thus, "Professional mastery is essential to ensure that air power operations are conducted effectively and in accordance with international and domestic law and Australia's societal norms'.[12] Operations within the RAAF's remit include 'operations conducted to coerce an adversary towards our preferred outcome through controlled use of force short of armed conflict. This may involve … providing support for coercive diplomacy'.[13]

Coercive Diplomacy

Since being freed from the Cold War constraints of nuclear-backed superpower rivalry, Western countries have often resorted to the threat or use of limited force in managing their international relationships. The strategy of 'coercive diplomacy', according to Peter Jakobsen, 'seeks to resolve crises and armed conflicts without resorting to full-scale war. It relies on threats and the limited use of force to influence an adversary to stop or undo the consequences of actions already undertaken'.[14] As an essentially reactive strategy, coercive diplomacy in the form of threats is thus distinguishable from compellence (threats aimed at causing an adversary to initiate action) and deterrence (threats aimed at causing an adversary not to act in the first place). Positive and negative assurances play a part: in

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10   Royal Australian Air Force, Australian Air Publication 1003—*Operations Law for RAAF Commanders*, Second Edition, Air Power Development Centre, Canberra, 2004, p. 1.

11   Royal Australian Air Force, Australian Air Publication 1000–D—*The Air Power Manual*, Fifth Edition, Air Power Development Centre, Canberra, 2008, p. 48.

12   ibid, p. 32.

13   ibid, pp. 67–68.

14   Peter Viggo Jakobsen, 'Coercive Diplomacy', in Alan Collins (ed.), *Contemporary Security Studies*, 2nd Edition, Oxford University Press, Oxford, 2010, p. 279.

coercive diplomacy, the threat or use of (limited) force is backed by the promise of escalation (in terms of the type and quantity of force that would be used) if the coercer's demands are not met, and by the assurance of no (or no further) forceful action if they are.

In discussing the ethics of 'limited war' as contemplated by a strategy of coercive diplomacy, it is worth noting first the distinction that is sometimes drawn between war on the one hand and lesser forms of conflict on the other. The RAAF *Air Power Manual* states that 'Threats to the security of Australia or its interests can appear at any point on a spectrum of conflict that extends from stable peace and dealing with natural disasters through to major armed conflict or war'.[15] Although 'war' and 'armed conflict' are terms often used interchangeably, Australian military doctrine stipulates that there is a difference:

> For a formal state of war to exist, the resort to war must be lawful and the parties must have made a declaration of war. Armed conflict describes conflict between states or protracted violence between government authorities and organised armed groups within a state in which at least one group has resorted to the use of armed force to achieve its aims.[16]

This doctrinal distinction has no parallel in military ethics, and it is not the case that different principles govern the use of force depending on whether such use is labelled 'war' or as 'armed conflict'. Accordingly, there is no separate and special ethical standard applicable to coercive diplomacy just because it purportedly involves 'limited war' rather than what analysts of this strategy call 'full-scale war'.

Prescribing ethical requirements for coercive diplomacy, whether carried out using air power or other military instruments, is relatively straightforward when it comes to the *jus in bello* principles of discrimination and proportionality. In 1932 former British Prime Minister Stanley Baldwin alluded to the deliberate targeting of civilians when he said: 'I think it is well also for *the man in the street* to realise that there is no power on earth that can prevent him from being bombed. Whatever people may tell him, the bomber will always get through'.[17] Today, however, the reverse attitude holds sway, as reflected in the near-universal commitment to Article 51(2) of the 1977 Additional Protocol (I) to the Geneva Conventions which provides: 'The civilian population as such, as well as individual civilians, shall not be the object of attack. Acts or threats of violence the primary purpose of which is to spread terror among the civilian population are prohibited'. Article 57(2)(a)(iii) of the Protocol, reflecting commitment to the *jus in bello*

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15   Australian Air Publication 1000–D—*The Air Power Manual*, p. 39.

16   ibid.

17   Cited in Timothy Garden, 'Air Power: Theory and Practice', in John Baylis, James Wirtz, Eliot Cohen and Colin S. Gray (eds.), *Strategy in the Contemporary World*, Oxford University Press, Oxford, 2002, p. 150 (emphasis added).

principle of proportionality, prohibits attacks 'which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated'.[18] These principles are victim-oriented rather than weapons-specific, and they apply regardless of whether force is used by land, sea or air. To the extent that air power deserves special consideration from a *jus in bello* perspective, some of its attributes can and often do facilitate the discriminate and proportionate application of force. The heightened perspective provided by air power, for example, enables better differentiation between combatants and non-combatants, and the precision application of force can 'avoid unnecessary casualties, damage or undesired effects'.[19]

When it comes to the principles of *jus ad bellum* (the justice of going to war), tensions inherent in the concept and practice of coercive diplomacy make it difficult for air commanders and their political masters to know what is ethically permissible. The Just War tradition requires that the use of force has a just and proportionate cause, is properly authorised and motivated by right intention, and is a last resort. There is also an ethical requirement, close to the heart of every strategist, that the use of force has a reasonable prospect of success. This is the best starting point for an ethical discussion of coercive diplomacy, because the identification of any problems with the strategy itself can then inform consideration of how other *jus ad bellum* principles might apply.

Prospect of Success

The focus of this paper is coercive diplomacy in the form of 'limited use of force', and on this point Jakobsen regards the distinction between that and 'full-scale war' as crucial 'because resort to brute force means that coercive diplomacy has failed'.[20] The distinction is difficult to make in practice, but Jakobsen suggests that a shift from an air campaign to a ground war indicates a shift from coercive diplomacy to brute force. By this reasoning, coercive diplomacy failed in the 1991 Gulf War because ground troops had to be used, but it succeeded in NATO's air-only Kosovo campaign in 1999. In Kosovo, Serbia had been increasing its use of force against ethnic Albanians in its southern province, and UN and European efforts to negotiate a peace settlement had been unsuccessful. Without UN authorisation, NATO intervened to resolve a burgeoning humanitarian crisis. Over 23 000 bombs were dropped in the first 10 weeks of operations, and from the 38 000 NATO missions flown, the alliance reportedly suffered not a single casualty. By June 1999,

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18   *Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I)*, 8 June 1977.

19   Australian Air Publication 1000–D—*The Air Power Manual*, p. 93.

20   Jakobsen, 'Coercive Diplomacy', p. 280.

after Serbia had been coerced back to the negotiating table, a peace settlement was reached.[21]

The Kosovo example aside, the history of coercive diplomacy is overwhelmingly the history of its failure. Jakobsen has analysed 36 coercive diplomacy episodes that took place between Western states and various aggressors (in Iraq, Serbia, Haiti, Somalia, Libya, North Korea, Iran, Sudan, Afghanistan and Pakistan) between 1990 and 2008. Western states achieved just six lasting successes, and five of these had been preceded by earlier failed attempts at coercive diplomacy. In only three instances has coercive diplomacy achieved what Jakobsen describes as a 'cheap success'. One cheap success in 1994, in which compliance was achieved without resort to force, involved the US pressuring generals in Haiti to restore the Haitian president to power. A second was the coercion of Pakistan in 2001 to end its support for the Taliban and to support the US-led war in Afghanistan. The third cheap success, in 2003, involved coercing Libya to drop its support for terrorist activities.[22] The remainder of the empirical record tends to illustrate how, through irregular or asymmetric counter-coercion strategies like guerrilla warfare, adversaries have been able to deny Western forces quick, low-cost victories. Military superiority has seldom translated into strategic success, and the reasons for this perhaps originate in tensions inherent in the theory and practice of coercive diplomacy.

In any discussion of a strategic term of art like 'coercive diplomacy', it is worthwhile first to recall the plain meaning of words. The verb 'coerce' means 'to compel by force, intimidation, or authority, especially without regard for individual desire or volition'. By contrast, the noun 'diplomacy', in addition to meaning 'the conduct by government officials of negotiations between nations', can also mean 'skill in managing negotiations, handling people, etc., so that there is little or no ill will'. The late Caskie Stinnett, an American travel writer, once joked that 'A diplomat is a person who can tell you to go to hell in such a way that you actually look forward to the trip'. If it is the case that a person (or state) can be either diplomatic or coercive, but not both at the same time, the strategy of coercive diplomacy would seem to be in serious semantic trouble from the outset.

In practice, the 'aggressive gentleness' of coercive diplomacy is potentially confusing and possibly self-defeating. To succeed in this strategy, the coercer must frighten and reassure the adversary at the same time. Coercive diplomacy is supposed to be about avoiding large-scale conflict, yet it threatens escalation. Here, the key concern is the credibility of threats and promises issued by the coercer. The RAAF *Air Power Manual* states: 'Timely delivery of a force or payload by air may provide a significant deterrent effect, especially if the speed

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21 Garden, 'Air Power: Theory and Practice', p. 153.

22 Jakobsen, 'Coercive Diplomacy', pp. 287–291.

and nature of its delivery implies more substantial action or escalation to follow'.[23] The danger when dealing in implications, however, is that the message the coercer intends to convey is not the message the adversary receives. Misunderstandings, deliberate or otherwise, are commonplace in even the most polite and careful diplomatic negotiations. Coercive diplomacy, conducted with precision strikes and press releases rather than over cucumber sandwiches, is a form of diplomacy much less conducive to fine-grained messaging. Thomas Mahnken warns that it is 'misleading to believe that force can be used in highly calibrated increments to achieve finely tuned effects. War has its own dynamics that makes it an unwieldy instrument, more a bludgeon than a rapier'.[24] Actions, even if they speak louder than words, might be harder to understand. Is the limited use of force a sign of strength; the restraint of the powerful deciding not to be as heavy-handed as they could towards an adversary? Or is it a sign of weakness; the restraint of the risk-averse deciding not to place their military personnel in harm's way? Is the use of air power a foretaste of worse things to come, or is it indicative of a reluctance to use force at all? Where there is doubt in the mind of an adversary on such questions, coercive diplomacy is vulnerable to failure.

It is a 'paradoxical feature' of coercive diplomacy, Jakobsen argues, that 'the prospects of cheap success are highest when the coercer is willing to go all the way and escalate to brute force if need be'.[25] In essence, coercive diplomacy is founded on a preparedness to abandon it in favour of unlimited war. Yet recent history shows that, for better or for worse, Western governments pursuing non-vital interests tend to regard coercive diplomacy as a substitute rather than a possible prelude to large-scale war. This attitude is largely driven by a strong aversion on the part of domestic populations to friendly casualties. The use of air power, especially in a non-contested or poorly-contested airspace, is an instrument well suited to prevailing political appetites. Arguably, however, the very circumstance (casualty aversion) that prompts the *limited* use of force is what also precludes escalation. If the threat of escalation that underpins coercive diplomacy is thus not credible in the eyes of an adversary, so the strategy must fail on its own terms. In a 1999 RAND study, Daniel Byman and his co-authors highlighted the dilemma as follows:

> Because the public and allies often see air strikes as a low-risk, low-commitment measure, air power will be called on when U.S. public or allied commitment is weak—a situation that will make coercion far harder. The prospects of escalation will be difficult in such circumstances … air power's

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23 Australian Air Publication 1000–D—*The Air Power Manual*, p. 96.

24 Thomas G. Mahnken, 'Strategic Theory', in John Baylis, James Wirtz, Colin S. Gray, and Eliot Cohen (eds.), *Strategy in the Contemporary World*, Second Edition, Oxford University Press, Oxford, 2007, p. 71.

25 Jakobsen, 'Coercive Diplomacy', p. 296.

very strengths with regard to domestic support and coalition dynamics could become weaknesses, if they lead air power to be used in situations that lower its credibility. Such use of air power may damage its credibility in future contexts and make coercion even harder.[26]

It is an important principle within the Just War tradition that, because death and destruction inevitably result from war, there should be a reasonable chance that a would-be user of force will bring about a better peace than what currently exists. To wage war in the knowledge that the damage caused is likely to be in vain is unjust. Although this paper has thus far painted a grim picture of coercive diplomacy from a theoretical perspective, reasonable minds will differ in assessments of the likely success or failure of coercive diplomacy in particular circumstances. Thus, an ethical discussion of the use of force cannot be restricted to 'reasonable prospect of success'. Accordingly, the remainder of this paper identifies some potential ethical problems with coercive diplomacy, each related to the strategy's inherent contradictions, by reference to the *jus ad bellum* principles of just cause, proportionate cause, right intention, right authority, and last resort.

Just Cause

The default position of the Just War tradition is that war is wrong. This fundamental principle is manifested in Article 2(4) of the UN Charter which provides that: 'All Members [states] shall refrain in their international relations from the threat or use of force'.[27] A state seeking to use armed force has the onus of proving that the justice of its cause outweighs the inevitable calamity that war would bring. The cause of a state seeking to wage war is just if it appeals to a moral principle higher than mere self-interest. A desire to exact revenge, greed for more territory and influence, or simple aggression can all be motivating forces for going to war but none of them qualify as a just cause. When contemplating coercive diplomacy, using or threatening force to promote one state's interests can be but is not necessarily the same as doing those things for a just cause. Theorists' description of coercive diplomacy as a reactive strategy rather than an aggressive one is a good start, but ethical judgment will ultimately come down to whether the 'limited war' being contemplated is essentially defensive (of oneself or of others). Current Just War thinking and state practice indicates that only two justifications for using force have the potential to pass muster from an ethical perspective: self-defence (including collective self-defence) and intervention to prevent or mitigate a large-scale humanitarian disaster.

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26   Daniel L. Byman, Matthew C. Waxman, and Eric Larson, *Air Power as a Coercive Instrument*, RAND Corporation, MR-1061, Santa Monica, CA, 1999, p. 138.

27   United Nations, *Charter of the United Nations*, Chapter I: Purposes and Principles, available at http://www.un.org/en/documents/charter/chapter1.shtml, accessed 5 June 2012.

Regarding self-defence, a restrictive view (based on strict adherence to the wording of Article 51 of the UN Charter) is that the right of self-defence may only be invoked and acted upon after an attack has taken place. A more permissive view (based on customary international law) is that the right of self-defence may also be exercised against a real and imminent threat when the necessity of that self-defence is instant, overwhelming, and leaving no choice of means and no moment of deliberation. The most permissive view (invoked by the US Government under President George W. Bush) allows for pre-emptive self-defence; that is, the use of force even when a threat is not imminent and uncertainty remains as to the time and place of the enemy's attack. The latter view has no foundation under existing international law.[28] International legal rules notwithstanding, in practice an individual state might face an ethical dilemma over whether it is a just cause to exercise self-defence pre-emptively, in particular by using the speed and reach afforded by air power. The difficult question is: how does one ethically differentiate coercive diplomacy from other strategies involving the use of force? Is pre-emption in general, or a particular pre-emptive strike, essentially proactive or reactive? The latter characteristic of a given use of force more easily attracts ethical justification. Beyond the deontological insistence on self-defence, one could also apply consequentialist reasoning to argue against the pre-emptive use of air power in certain circumstances. In June 1981, when eight Israeli F-16 fighter jets dropped sixteen 2000-pound bombs on the nearly-completed Osirak nuclear reactor in Iraq, Prime Minister Menachem Begin regarded this action as necessary to prevent an existential, nuclear threat to Israel. The air strike was widely condemned internationally on principle alone, but it is useful also to recall that it served to increase Saddam Hussein's determination to develop a nuclear deterrent and to better resource and organise the Iraqi nuclear program.[29]

Regarding humanitarian intervention, a long-prevailing attitude has been that military action of this kind violates the fundamental principle of state sovereignty which underpins international stability worldwide. However, there is an emerging and strengthening view in the international community that humanitarian intervention is acceptable if civilians are faced with the threat of serious and irreparable harm in one of two ways. The first is large-scale loss of life, actual or anticipated, with genocidal intent or not, which is the product of deliberate state action, state neglect, inability to act, or state failure. The second way is large-scale 'ethnic cleansing', actual or anticipated, whether carried out by killing, forced

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28   See Philip Alston, *Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions* (A/HRC/14/24/Add.6), United Nations General Assembly, 28 May 2010: p. 15.

29   See Colin H. Kahl, 'Before attacking Iran, Israel should learn from its 1981 strike on Iraq', *Washington Post*, 3 March 2012, available at http://www.washingtonpost.com/opinions/an-israeli-attack-against-iran-would-backfire--just-like-israels-1981-strike-on-iraq/2012/02/28/gIQATOMFnR_story_1.html, accessed 27 April 2012.

expulsion, acts of terror, or rape.[30] Last year, the passage of UN Security Council Resolution 1973 (17 March 2011) on the situation in Libya was the first occasion the Security Council had authorised the use of force in a state, and against the wishes of that state, for civilian protection purposes. By the middle of March 2011, the government forces of Libyan leader Muammar Gaddafi had been about to attack the rebel-held city of Benghazi and, as threatened, to clear its population of one million people 'house by house'.[31] In response to this imminent attack on a large number of civilians, the Security Council authorised the use of 'all necessary measures ... to protect civilians and civilian populated areas under threat of attack ... while *excluding a foreign occupation force* of any form on any part of Libyan territory'.[32] As such, air power was the military instrument of choice.

It is not clear, however, whether European and US leaders were here engaged in coercive diplomacy which, as discussed above, requires that an adversary retains a choice about whether to comply with a coercer's demands. Was the air-powered Libya intervention carried out for humanitarian purposes (a just cause) with the aim of persuading Gaddafi to comply with demands to stop killing civilians? Or was this really about regime change (an unjust cause); taking sides in a civil war with a view to effecting the removal of Gaddafi altogether? The answer, perhaps, is both (or one after the other), but the first characterisation is better able to withstand ethical scrutiny. Similar questions might arise in respect of the ongoing violence inside Syria. In March 2012 the influential US Senator John McCain called for the United States to lead an 'international effort' involving air strikes on Syria's military forces, saying 'The kinds of mass atrocities that NATO intervened in Libya to prevent in Benghazi are now a reality in Homs'. He argued that 'If Assad manages to cling to power ... it would be a strategic and *moral* defeat for the United States', and that the only 'realistic' way to 'to stop the slaughter and save innocent lives' is 'with foreign air power'.[33] In this argument, there appears to be a mix of just

30   See International Commission on Intervention and State Sovereignty, *The Responsibility to Protect: Report of the International Commission on Intervention and State Sovereignty*, International Development Research Centre, Ottawa, 2001, p. 32.

31   David Fisher and Nigel Biggar, 'Was Iraq an Unjust War? A Debate on the Iraq War and Reflections on Libya', in *International Affairs*, vol. 87, no. 3, May 2011, pp. 687–707, at p. 701.

32   United Nations Security Council, S/RES/1973 (2011), *Resolution 1973 (2011)*, 17 March 2011, p. 3, available at http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/1973(2011), accessed 5 June 2012.

33   Anonymous, 'McCain: U.S. should lead air strikes on Syria', *CBS News*, 5 March 2012, available at http://www.cbsnews.com/8301-202_162-57390855/mccain-u.s-should-lead-air-strikes-on-syria/, accessed 30 April 2012 (emphasis added). The following month, French Foreign Minister Alain Juppe said that, if a plan by international envoy Kofi Annan calling on Damascus to withdraw troops and heavy weapons from cities failed, 'we would have to move to a new stage with a Chapter Seven resolution (which allows for action that could be backed by force) to stop this tragedy': anonymous, 'Syria crisis: France raises use of force', *BBC News*, 25 April 2012, available at http://www.bbc.co.uk/news/world-middle-east-17847584, accessed 30 April 2012.

and unjust causes (humanitarian intervention and regime change respectively). From an ethical perspective, this poses a danger more generally that worthwhile interventions might fail to attract political support if, based on past practice, they are perceived as disguised Western aggression.

Right Intention and Proportionate Cause

The Libya and Syria examples also touch on the Just War principle of right intention. This concerns the kind of post-conflict situation that is truly sought by those who would use force. The annihilation of a hated enemy like Gaddafi or Assad is not a legitimate goal in itself, although it might be the by-product of a moral mission to establish a more just peace in his territory than existed previously. The restrained and precise application of force is consistent with a desire to bring about a peace that is not haunted by excessive damage and popular resentment. As stated in the RAAF *Air Power Manual*, for example, 'controlled application of air power can assist in minimising the degree of rebuilding that may be necessary in the stabilisation and reconstruction phases of conflict'.[34] Coercive diplomacy (or 'limited war') in general is more likely to satisfy the ethical requirement for right intention if it is practised in a manner consistent with strategic theory. Specifically, if the adversary is afforded room to choose whether or not to comply with the coercer's demands, and if he is assured that compliance will not be followed by further coercive action, it will be clear that the coercer is genuinely intent on avoiding conflict on a larger scale. By contrast, if a coercer uses threats and limited force only to legitimise their subsequent and predetermined resort to 'brute force', such action does not qualify as coercive diplomacy and it lacks right intention.

Further to this theme of restraint, a just cause (pursued with right intention) must also be *grave enough* to warrant going so far as to wage war, with all its attendant death and destruction. To respond to an insulting remark from a foreign ambassador with a declaration of war, for example, would be an illegitimate overreaction. Although the insult might somehow be characterised as an 'attack' upon the victim's state, resorting to war would become the greater of two evils. The Just War tradition requires, instead, a proportionate cause for war. To use a real example, the expulsion of Iraqi forces from Kuwait in 1991 was proportionate to the injury (invasion) suffered by that country, but for Kuwait's defenders to have gone on and invaded Iraq would have been disproportionate from a *jus ad bellum* perspective.

When contemplating proportionate cause in the context of coercive diplomacy, especially that which involves only air power, a common criticism is that such use of force is about responding to 'little things'. In an uncontested or poorly contested airspace, it might appear that the application of air power is about using force in

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34   Australian Air Publication 1000–D—*The Air Power Manual*, p. 95.

pursuit of causes not worth dying for. The attribute of 'relative impermanence' means "Air power can contribute to operations whilst avoiding the potential military and political liabilities that can arise from an extended physical presence in a foreign country".[35] Throughout the 1990s, as Mahnken has observed, 'air power seemed uniquely suited to the types of conflicts in which the United States was involved—wars for limited aims fought with partial means for marginal interests'.[36] The military historian Eliot Cohen once wrote that 'air power is an unusually seductive form of military strength, in part because, like modern courtship, it appears to offer gratification without commitment'.[37] In like fashion, Michael Ignatieff has described the 1999 NATO intervention in Kosovo as 'the kind of war a nation fights when it wants to, not when it must, when values rather than survival are on the line; when commitment is intense but also shallow'.[38] Such observations, even assuming they are true, do not necessarily prompt concern from an ethical perspective. The normative restraints on using force apply regardless of whether force manifests in a short, low-risk, air-only campaign or a lengthy, high-risk ground-based counterinsurgency. Even if the context for using air power falls well short of a 'War of National Survival',[39] the imperatives of the Just War tradition remain. Even if air power is seldom used on a grand and heroic scale, at the same time it has attributes that appear well suited to responding in a measured and proportionate fashion. In coercive diplomacy, minor threats attract minor uses of force in response, and this is done with the intention of forestalling the emergence of major threats.

Right Authority and Last Resort

Regarding the ethical requirement that force be properly authorised and used only as a last resort, it is useful to examine the case of unmanned aircraft. A 'pre-ethical' question might arise as to whether the use of drones counts as 'war' in the first place. On the one hand, drone strikes could be regarded as just the latest example of how the penetration, speed and reach afforded by air power is used to overcome physical barriers to engage enemy targets. On the other hand, because there is no onboard pilot involved, the use of armed drones seems to fall short of the traditional conception of war as a contest in which both sides are necessarily engaged in a relationship of mutual risk. According to Martin van Creveld, 'War does not begin when some people kill others; instead, it starts at the point where

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35   ibid, p. 94.

36   Thomas Mahnken, *Technology and the American Way of War since 1945*, Columbia University Press, New York, NY, 2008, p. 179.

37   Cited in Mahnken, *Technology and the American Way of War since 1945*, p. 179.

38   Michael Ignatieff, *Virtual War: Kosovo and beyond*, Picador, New York, NY, 2000, p. 4.

39   Australian Air Publication 1000–D—*The Air Power Manual*, p. 41.

they themselves risk being killed in return'.[40] And this view appears to resonate in the RAAF *Air Power Manual* when it states: 'Warlike operations are those military activities where the application of force is authorised to pursue specific military objectives and there is an *expectation of casualties*'.[41] If one assumes, for the sake of argument, that risk-free drone warfare is not an insurmountable paradox, it nevertheless raises questions about the relationship between risk and right authority.

The US deployment of armed Predator drones to Libya in April 2011 promised to be casualty-free, and this fed into an argument that the usual rules for congressional authorisation of the use of force did not apply. The White House argued in June that Congress did not need to authorise US military operations in Libya extending beyond the 60 days already authorised at the President's discretion because:

> U.S. operations do not involve sustained fighting or active exchanges of fire with hostile forces, nor do they involve the presence of U.S. ground troops, U.S. casualties or a serious threat thereof, or any significant chance of escalation into a conflict characterized by those factors.[42]

At least two conclusions could be drawn from such an assertion being accepted: either that the standard for authority to wage war has been lowered, or that authority is unnecessary for something that does not count as war.

It is a commonly expressed concern that the low-risk resort to manned air power (and the risk-free resort to unmanned air power) somehow lowers the threshold for using force. The idea is that these technologies of risk reduction (and risk elimination) enable less anxious contemplation by politicians about using force to solve political problems, since the traditional countervailing moral considerations as regards one's own side (deaths, injuries, grieving families, etc.) no longer apply. The official US Air Force report on NATO's 1999 Kosovo intervention included the statement:

> The air war over Serbia offered airmen a glimpse of the future, one in which political leaders turned *quickly* to the choice of aerospace power to secure the Alliance's security interests without resorting to more costly and hazardous

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40   Cited in P.W. Singer, *Wired for War: The Robotics Revolution and Conflict in the 21st Century*, Penguin, New York, NY, 2009, p. 432.

41   Australian Air Publication 1000–D—*The Air Power Manual*, p. 40 (emphasis added).

42   White House, *United States Activities in Libya*, 15 June 2011, available at http://www.washingtonpost.com/wp-srv/politics/documents/united-states-activities-libya.html, accessed 8 August 2011.

alternatives that would have exposed more men and materiel to the ravages of war.[43]

The resort to air power might be quick, but it is difficult to make an ethical judgment as to the line between 'quick' and 'too quick'. Lowering the threshold for political decisions to use force is not necessarily a bad thing; if the cause for war is just, why not hasten in its pursuit? However, if such lowering is the result of civilian disengagement from the war-making process (because imaginations are not excited at the prospect of any risk and sacrifice), doubts might arise as to whether there is sufficient civilian authorisation for the use of force. Even when a nation's leader claims (as above) that there is no 'significant chance of escalation', it is the immutable nature of war that all risks cannot be predicted and eliminated. A democratic state that would wage war in the name of its citizens, thus potentially endangering them, requires their consent.

Any lowering of the threshold for using force is also relevant to the principle of war as a last resort. Even when a given use of force passes all the tests discussed thus far in this paper, it remains an ethical requirement that recourse to violent action must only occur after every other way of achieving an aim has been exhausted or proven to be ineffective. The trouble with the word 'last' is that it can generate an expectation that a lengthy period of time needs to pass before force is used. Ethically speaking, if circumstances are shifting rapidly, there is nothing necessarily wrong with the last resort being also the first response. As the RAAF *Air Power Manual* states: 'Air power may be the only option to provide an immediate response in some emergent situations'.[44] It could well be argued that in Libya last year, for example, the use of European and US force was a last resort because it was applied just in time to prevent a mass slaughter. It is important, however, to avoid any false distinction between the end of coercive diplomacy, which involves the use (rather than only the threat) of 'limited' force, and the beginning of 'full-scale' war. Even if the use of force for coercive diplomacy purposes ends up in fact preceding more force (the coercer's threat of escalation is followed through), the last resort test still applies in the first instance.

CONCLUSION

Niccolò Machiavelli wrote in *The Prince*:

> … men ought either to be well treated or crushed, because they can avenge themselves of lighter injuries, of more serious ones they cannot; therefore the

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43   Cited in Mahnken, *Technology and the American Way of War since 1945*, p. 187 (emphasis added).

44   Australian Air Publication 1000–D—*The Air Power Manual*, p. 85.

injury that is done to a man ought to be of such a kind that one does not stand in fear of revenge.[45]

At the heart of the problem of coercive diplomacy, and of air-powered 'limited war', is uncertainty over the wisdom and virtue of restraint. When it comes to both the strategies and the ethics of using armed force, practice often fails to resemble that which is prescribed by theory. There is a strategic and ethical imperative, however, to aim constantly for a resolution of this sometimes tragic disparity. The purpose of this paper has not been to prescribe ethical solutions to every conceivable eventuality. Rather, by highlighting the ethical principles at stake when force is used, it is intended to stimulate the kind of questioning that informs the making of decisions that are good as well as smart. Is coercive diplomacy, especially using air power, a feeble half-measure; a strategy of the irresolute and fearful? Or is it a strategy of the powerful; an exercise in restraint by those in the best position to champion the norms of civilised warfare? Should a powerful state with versatile air power assets stay its hand, but thus risk allowing an emerging problem to fester and worsen into something more threatening? Or should such a state seek to nip that problem in the bud, but thus risk exacerbating over the longer term a problem that might otherwise have remained a small one? Faced with these and other dilemmas, politicians with militaries at their disposal often prefer action rather than inaction, not least because it feels and looks better to be 'doing something'. Sometimes, however, a leader will be better off taking no action at all, a difficult decision possibly requiring what the RAAF *Air Power Manual* calls 'moral courage'.[46] The enduring success of coercive diplomacy in general, and of individual attempts at coercion, requires that the coercer is not more sinning than sinned against. In a world where perception is potent and war remains the greatest of human evils, strategy and ethics are necessarily interdependent.

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45   Niccolò Machiavelli, *The Prince*, translated by W.K. Marriott, J.M. Dent & Sons, London, 1958, p. 13.

46   Australian Air Publication 1000–D—*The Air Power Manual*, pp. 27–28.

Panel Discussion

Panelists
- Professor Bruce W. Jentleson
- Dr Eric V. Larson
- Dr Benjamin S. Lambeth
- Dr Christian Enemark

Wing Commander Bill Evans (RAAF – Australian Defence Force Warfare Centre): Dr Lambeth, a comment on effects-based operations. Now, I don't want to reopen that old wound, but your point number seven I think is phrased a little ambiguously because it implies that if you're not engaging in an effects-based approach then you're somehow bogged down in attrition. In Australia, at least, the ADF approach is that the natural obverse of attrition is manoeuvre, and the style of warfare we talk is either manoeuvre warfare or attrition warfare, and I think an effects-based approach to planning can apply equally to both. Effects-based approach is not a style of warfare; it's a way of analysing and using your resources efficiently and effectively to achieve specific effects. So it's just your phraseology. I mean, that's the way you look at it, but it's a little bit confusing in our context here in Australia. So, I just offer that as I suggestion.

Dr Lambeth: I have no quarrel with that.

Squadron Leader Grechen Fryar (RAAF – Air Power Development Centre): To put the question in context, Dr Lambeth mentioned President Clinton's decision to announce no ground forces in *Allied Force* as a strategic mistake. In discussions of coercive diplomacy, we often hear about military forces being the option of last resort. Is our flexibility to respond to situations unnecessarily constrained by the political belief that military force or the threat of force is a last resort, rather than a mechanism to be used in concert with other tools at the appropriate time?

Dr Lambeth: I think the only point I was trying to make there is that leaders should never say up front what they're *not* going to do; maybe that would have been a better way to phrase the point. And to make the associated argument that having had a ground element to the overall strategy would have been helpful. It did not necessarily require committing ground forces to combat, but certainly having ruled them out pre-emptively entailed some substantial opportunity costs that we could have avoided, simply by not doing it.

Air Marshal Ray Funnell (RAAF Retd): It comes out of a point that Ramesh Thakur made this morning when he recounted a conversation I had with him after the Kosovo conflict and Ben's paper reminded me of it. I pointed out to Ramesh Thakur at the time that publicly ruling out the use of land forces was strategically

stupid and operationally counterproductive. To continue that conversation Ramesh and I had, he said to me, 'Is this is the first occasion on which air power won a war by itself?' My response was, 'Ramesh, that's a stupid question'. He said, 'Well, OK, can you tell me in 8000 words why that is so?', and so I did—and he was convinced in the end as well. But the point I wanted to make and the point that I brought out in that discussion with Ramesh is that the getting of wisdom—this is with military power—for military and political leaders and their advisers comes when they conceive of and use military power as an integrated whole and not as a mere agglomeration of air power, land power and sea power.

Professor Jentleson: Just to jump in on both of those questions. On the Kosovo question, I very much agree that it was a political calculation by the Clinton administration and, in fact, the poll data did not really support the necessity of that, let alone the strategic calculations. There was a sense that the American people were prepared to support ground troops in the context of a little bit of a 'rally round the flag' and those sorts of things. So, in some ways, the politics and the strategy could have pointed in the same direction. I think the administration had a lot of other things going on at the time, many of which you'll probably remember politically, and it was being very politically risk-averse, but it wasn't necessarily the case. On the last resort question, I agree with the implications of the questioner. I think it's a very dangerous notion. If we understand that the Milosevics of the world, the Rwandans in 1994 and others, in their own way are rational calculators—brutally so, but instrumentally rational matching their own ends and means—and if they believe (and I think this was Richard Holbrooke's point) that force is a last resort or even that very coercive action is something like step seven in your progression, they kind of take the attitude, 'Call me when you get to step six'. And so you get all sorts of atrocities that happen in between. In the original ICISS Report that Ramesh was part of and Gareth Evans[1] chaired they had a very interesting formulation in which they talked about force as one might call not a first resort, not a last resort, but a potentially early resort. And they basically had language to the effect that if you could anticipate that all other measures were not going to achieve the objectives you had, then you could resort to force earlier rather than as a last resort. And I think that makes much more sense when you put it in an integrated whole of the other elements of the strategy. But last resort really basically means that the guy on the other side knows and takes the attitude of, 'Call me when you're getting serious, international community'.

Dr Mount: I think that this is such an interesting question—this 'last resort' versus 'first choice' issue—and I wonder Christian [Enemark], without putting you on the spot but given that you lost 15 minutes of your talk, whether you would

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1   Former Australian Foreign Minister and co-chair of the ICISS.

you like to comment on this because it's an important ethical argument that force should be a last resort. Is this one of the things that is being revised or changed?

Dr Enemark: Last resort is a particularly unhelpful principle to have to work with because of the word 'last'; a descriptive that can only ever be applied in hindsight. I think the principle exists more to sort of encourage people to investigate, genuinely and with vigour and sincerity, non-violent alternatives to resolve disputes. I don't think it's a principle that actually requires that you tick off a certain number of things before actually getting to the last resort. It simply has a restraining influence, depending on the circumstances. I can conceive of a circumstance, for example, where in a fast-paced environment the last resort would also be the first response and air power may well be the first and last move towards the use of force on that front.

Neil James (Australia Defence Association):   Christian [Enemark], if I've understood you correctly, you said that if you move from coercive diplomacy to brute force then that's an ethically improper or even a failing, but surely it's just a continuum in both ethical and operational terms because you're following the principle of proportionality the whole time.

Dr Enemark: I see no great value in drawing a distinction sharply between coercive diplomacy and brute force, and I think empirically it's impossible to make the distinction except possibly in hindsight. I think I would agree with you that it is a matter of degree and a continuum and I certainly wouldn't argue that there is a separate set of ethical principles that cover brute force that do not apply with respect to coercive diplomacy. So I think you and I agree that it's a matter of degree and a continuum.

Dr Mount: There's another question that hasn't come up today which is an ethical question which I think relates to strategy and what it is that air power can do from the planning stage right through. There's much talk in ethics about the justice after the conflict, which I thought might be an area that we can explore because it involves how we plan for the potential implications; this whole idea that we shouldn't leave a place worse off than what it was. And I would imagine that all of our panellists would have views on this in terms of the responsibility and strategic obligation or the implications of going in and using force. I'll just leave that as a comment.

Squadron Leader James Rea (RAAF – Australian Defence Force Warfare Centre):   I'd just like to follow on and, in a sense, roll in what is ostensibly a key part of our job, which is to define particular subject material and really tie it down to its core component. I can hear everybody thinking that they're probably glad they don't have that job, but it's essential with good doctrine that that is one of the core tenets. I'd just be interested in the panel's opinion then of the ambiguity that exists within coercive diplomacy, and we've heard it several times already today, that they sit adults with each other to a certain degree. So perhaps a suggestion

would be that, in order to extend some clarity within this whole domain, perhaps diplomacy is defined and has an end in itself that doesn't involve a military adjunct to it. And this leads onto what Dr Enemark was saying in terms of the ethics that we have and then can hand over to military planners who work very comfortably in a space that doesn't involve ambiguity, whereas diplomats work in that space where clearly the ambiguity is a part of the mix. And so the handover between the two, and that whole expectancy of limited military action to provide coercion, only creates friction whereby, if you defined diplomacy that ended with the speaking and the handshake and then the coercion which commenced some form of force, we'd be able to work, certainly within the military, with greater clarity in terms of the goals and objectives and military aims that want to be achieved.

Dr Larson: I can try to answer that question. It seems to me that when diplomacy and bargaining tend to break down that's when force or threats become a real possibility. And when bargaining and diplomacy break down it either means the diplomats haven't done a very good job or it means that the parties in the bargaining and diplomacy have inimical interests and it's just not resolvable at a peaceful level. At that point, one side or another may decide to threaten or use force and then the course of diplomacy takes, I think, a different shape where force is either hanging over the bargaining situation or force has already been used, and then the other party has to decide whether it too wants to resort to force. I think Libya is a very good example of that sort of escalation. The rebels started out with demonstrations challenging Gaddafi. Gaddafi decided to suppress the rebels using force rather than negotiations. The UN and NATO decided that they would employ force to prevent Gaddafi from effectively using force against the rebels and so on.

Professor Jentleson: I would just make two points in that regard. One was that slide I started out with, with the notion that you really have to make an analytic distinction working from a combination of general frameworks and templates to a particular case where force or the threat of force may actually make the problem worse. And so it's kind of this continuum that we started the day with, if you like, with diplomacy and that classical Sir Harold Nicolson definition: it's just the conduct of relations between nations by negotiation, and total war at the end. You really want to try to figure out where in that continuum you are, and the course of diplomacy is one of the available strategies, and so part of the decision is to determine which one fits best. Secondly, it was mentioned earlier that the Obama administration had established what's called the Atrocities Prevention Board, about a month ago; it was a big announcement that came out of our own efforts in the United States to figure out how to engage responsibility to protect and other aspects. And that grabbed the headlines that you'd have a high-level decision-making body integrating the State Department, the National Security Council, the Defense Department and others. But the rest of that was really kind of getting earlier into the 'food chains' and trying to figure out, through a variety of

mechanisms—and this is in the R2P concept—what can be done to try to reduce, by no means prevent totally, but reduce the number of conflicts that get to the point where your choice is do we need to use force or a heavy coercive element. There will always be those cases. It's a little bit like preventative medicine; you don't really know whether you would have had a heart attack if you hadn't been exercising well or not. But a lot of the work going on at the UN and the effort within the US and others now is to really engage simultaneously in those earlier sort of in the cycle of conflict issues so that we simply reduce the number of cases that come down to this point, because every one we've talked about is a really difficult case. So you're kind of operating at a lot of different dimensions of the whole effort to use diplomacy, to use development and to use military strategy to deal with the uncertainties and the threats that are in the world.

Wing Commander Brady Cummins (RAAF – Air Force Headquarters):   Mine's a relatively simple question, closer to Australia than Libya and even more recent. Do you consider the recent changes in Burma, without a shot being fired, are a result of coercive diplomacy, just deft diplomacy, or simply a policy change within the military government due to a fear of Chinese influence? And for Professor Jentleson and Dr Larson, how was this achieved, without reference to basketballers or complex diplomatic calculus equations?

Professor Jentleson: Can I use baseball or is that totally out of culture? It's a really interesting case; we did talk about this a little bit during the break. I think one of the interesting debates about Burma has been between those in the West, who had been pushing for more comprehensive and intensive sanctions, and what was sort of being argued to be the ASEAN [Association of Southeast Asian Nations] approach, which was a mix of some sanctions and elements of coercion with a greater degree of engagement. At the same time, I think two things happened. One is the strategic context changed for the Burmese in terms of some of the issues directly with China, not the least of which was the issue over the Myitsone Dam project. Secondly, is the shift from sort of 'circuit breakers' to 'transmission belts'. I think there was an increasing realisation internally that strategies that may have worked, defined that way by the military junta, were no longer working and that Burma really needed to shift strategy in ways that really were to a certain extent about regime self-perpetuation, not so much that you would have others coming into power, but to have stability amidst all the other things internally. So I think it's a mix of all of those factors kind of coming together, but there really was this shift I think to a greater number of transmission belts within key players in Burma, some of which had been the circuit breakers.

Aircraftman Gerald Brady (RAAF – Air Force Headquarters):   Gentlemen, this question is directed to anyone of you. So far you've all analysed how air power has been used as a tool of choice in achieving coercive diplomacy. With the advent of the information age, would you say that air power would have to compete with cyber warfare in being the primary tool of choice?

Dr Mount: You've stumped the panel I think. That's an over-the-horizon-type question I think. Can I ask you to rephrase it a little more simply, because this will give them time to prepare and actually come up with an answer.

Aircraftman Brady: Basically, I'm asking if you would resort to dominating cyberspace as a means to achieve coercive diplomacy, as opposed to air power. Just wondering if that's been explored.

Professor Jentleson: Just a small comment and I don't think it totally answers your questions, but I continue to view it as not necessarily an either-or issue. I mean, if you look at what's happening in the Iran course of diplomacy over the last couple of years; the use of the Stuxnet virus—whoever has been using it—has had an impact. It doesn't totally solve the problem, but perhaps it's slowed down this sense of the technological clock ticking that, in turn, potentially helps with the diplomatic elements to try and get a resolution. So I think it really is not necessarily an either-or, but what are the relative assets or strengths of different elements and of different tools we have in the toolkit.

Dr Mount: If I may comment on that, because it seems we had a good answer, if you look at the basic principles and distinguish between deterrence and compellence—deterrence meaning that you want to avoid someone behaving a certain way and compellence meaning you want to modify their behaviour, and then coercive diplomacy being a form of that—I think you can take that concept and you can use it as a sort of strategic framework for what it is that you're seeking to achieve in cyberspace. And there are many, many examples where cyberspace is being used, not as dramatic as Stuxnet, but where cyberspace is being used where the intention is to modify behaviour. I think the way that al-Qaeda was targeted and various forms of their ability to proselytise, for example, was being examined and then used and trying to be analysed. So, yes, it's a reach for an air power conference but it's an interesting area. It's the top priority for so much of the security planning.

Sergeant Melinda Boyd (RAAF – No 1 Recruit Training Unit):   My question is for Professor Jentleson. You spoke about Libya as an example of coercive diplomacy and then compared Syria as a not-best-fit for coercive diplomacy and why that is. I'm wondering if you could switch to North Korea and discuss how that fits; whether it does fit with coercive diplomacy being a good strategy to employ and, if not, what may be a good strategy for a long-term commitment to reducing their nuclear capability.

Professor Jentleson: I may probably plead what my colleague said. I do a lot of work on the Middle East and I consider myself to have a reasonable degree of expertise. I have much less expertise on North Korea. My sense is that with the strategy there, first of all, I think it's made efforts to try to use diplomacy, whether it's been the six-party talks or others. In the backdrop is always the possibility of a threat of force, but I think the threats there have been much less explicit than

they have been in any of the other cases. And then just going to the know thy target argument, we thought that Saddam's regime was opaque but it's very hard to know much about the North Korean regime, at least in my experience, and you find many of the so-called experts literally throwing up their hands more there. I do think that there has to be a diplomatic element—I actually think that China is in many ways the key actor there, even more so than the United States. But I don't really know a strategy that I could tell you I think is likely to resolve this issue because this regime is even more confusing and unpredictable than perhaps any other.

Dr Larson: I think that's right. The only thing that I would add is that I think we learned very early, in the late 1940s and early 1950s, that the only useful purpose for nuclear weapons was regime preservation. My sense is that the only resolution to this particular issue would lie in some guarantees that would preserve a rather odious regime and provide strong and enforceable guarantees for that. That's not a happy answer.

Dr Mount: Ben [Lambeth], do you have any comment on your 12 tips, in terms of North Korea?

Dr Lambeth: I don't know about North Korea, but our discussion here seems in general to be cruising at 60 000 feet without oxygen. Just hearing the dialogue back and forth, I was reminded of an important aspect of air power's development in recent years that hasn't been brought up, and we need not to forget. I put this in the category of what I call the downside of technology. Much of what has occasioned this conference and the issues that this conference has addressed are as a consequence of air power, in a perverse way, having become its own worst enemy. If you roll back to World War II, RAF Bomber Command and Eighth Air Force bombed cities and civilian populations because that's *all* air power could effectively do at the strategic level. The CEP [Circular Error Probable] of a 750-pound bomb dropped from a B-17 at 20 000 feet was about a half a mile, so 'collateral damage' was actually a strategy objective; that's what we sought. And then fast-forward to *Desert Storm*, where you had folks whose image of air power was steeped in the Vietnam experience, and we were watching every night on the evening news cockpit video images of laser-guided bombs going unerringly down the air shafts of Iraqi hard-structure facilities, and the reaction was, 'Wow, air power can now do *that*?' So, all of a sudden, this increased accuracy now becomes the capability to strive for. Once the word is out that we can do this, it now becomes not just something we strive for but actually *the requirement*, such that, if there's even one civilian casualty, that's now above the fold on the front page. In a perverse sort of way, technology development has had the effect of raising the bar of expected performance so high that air power's very capability is now increasingly pricing the tool out of the game. I guess my only point here is that, for commanders and leaders, along with the technology and capability goes a responsibility not to do what was the strategic objective a generation or two ago but now can become a

court-martial offence. It's just part and parcel of the profession's more exacting standards, and airmen need to make peace with it.

Dr Mount: I know you said you didn't want to comment on Libya because there are people here who are going to be speaking more specifically about the operation, but on this you're talking about the way it was perceived and, with your understanding of the benefits of looking across, is there something where air power has been its own worst enemy in the case of Libya in terms of that perception?

Dr Lambeth: I don't think so in that case, no.

Dr Mount: So that's an interesting one, without talking about lessons learnt. Christian [Enemark], do you have a comment on this?

Dr Enemark: I think I've managed to think about a response to the gentleman's excellent question about cyber. Yes, I think there's that there are probably a lot of people in this room wrestling with whether this whole cyber thing can be dealt with and contemplated as war in any way comparable to what has gone before. And I think the fundamental difficulty in trying to contemplate this challenge as a contest in the way that war is a contest is the problem of attribution—as Bruce Jentleson said, 'whoever has been using the Stuxnet'—because unless you can get attribution, you don't really in any practical sense have an enemy. So I wonder whether, in the cyber realm, a mode of thinking other than a war mode of thinking might be better suited, and maybe such a mode of thinking doesn't yet exist in any other walk of life and we have to think of a new one—'we' might be people beyond the military profession as well. I make this observation from my earlier work of over a decade of working on the issue of biological weapons and the very great difficult of attribution when it comes to a biological attack. It took the FBI seven years before they were able to get their forensics to the point where they thought they could charge someone for the anthrax attacks in the United States. I think the forensic challenge of attribution in the cyber realm is mind-boggling and, until you can get a handle on attribution, I don't think you can approach this with a war mentality.

The Air Campaign in Libya – Session Overview

Air Vice-Marshal Mel Hupfeld

Good morning to our distinguished guests, ladies and gentlemen, and welcome to a cool and wet Canberra day. We have got a lot of high-powered speakers here and I think it is important that we recognise that this is equally applicable to all of us, and the future of our Air Force depends on the values, the knowledge and the experience that we gather all the way through our Air Force careers. So I commend to you today to make the most out of it no matter what position in which you sit.

The first day of this conference set the scene for us and it laid the academic foundations for the discussions that will occur today. The negotiations are all done and now it is time to act. In our presentations yesterday we were reminded that the face of modern air warfare is a dynamic and a responsive one, and it is one in which air power is often called upon as a weapon of choice by governments when they are faced with unpalatable and difficult strategic choices. The events of the 'Arab Spring' in 2011 presented just such difficult challenges to the international community and the NATO states in particular. Given the mandate under the United Nations Security Council Resolution 1973, the NATO forces that intervened in Libya did so under the aegis of the responsibility to protect the lives of the Libyan people from oppression and tyranny under the Gaddafi regime. The context—political, economic, social, religious and ethnic in character—was complex and it was highly significant in the decision to use force and the manner in which force and coercive diplomacy were both considered and employed. We were reminded in the presentations yesterday that the application of military force in international relations is utterly dependent on the context of the dispute and the character of the confrontation taking place. The Arab Spring was just such a highly idiosyncratic context.

We also saw that the means and strategy within which we use modern air power in a coercive context depends on our understanding of the capacity of air power to act as an instrument of coercion. Our presenters laid out in a very clear fashion the circumstances and the means in which air power can play an important role in bringing coercive force to bear on recalcitrant States. How we think about employing air power is shaped by our understanding of its utility in the given context, its capacity to coerce, its ability to create psychological effects and its capacity to be decisive. Therefore, theory and context form the two pillars upon which we plan and employ our air power capabilities.

Finally, we were alerted to the changing nature of air power operations, particularly over the last two decades, and how those operations have challenged and been challenged by ethical considerations regarding the use of force. Today, we hope to build on those contextual and theoretic underpinnings to examine in some detail the actual application of air power in a modern setting.

In Libya in 2011 we saw an array of NATO forces carry out what was ultimately a successful campaign to cease the violence being brought upon the Libyan people by their own Government. The application of that force was not without issue and certainly not without challenges. How the respective air forces employed their air power to meet the objectives of this campaign will no doubt be a fascinating discussion. How did the actual employment of combat air power match the theory and, indeed, the policy that was applied to using air power to coerce in this context? How was the use of this air power shaped by the particular context of this conflict? What challenges and difficulties did the air commanders face in mounting and sustaining their forces during this campaign? And how successful did the air forces involved actually see their efforts in achieving the campaign objectives? There is much we can learn from the examination of this conflict and much that we hope to discuss in the day ahead. I am very confident that the ensuing discussions will prove both informative and very interesting. In the gaps between the presentations today is your opportunity to actually engage personally with those speakers if you do not get a chance to ask the questions to which you seek answers.

As our Chief of Air Force said yesterday, as a modest Western air force, the RAAF is vitally interested in the lessons we might derive from this campaign. We are interested to comprehend this particular facet of employing modern air power, and we are interested in all the aspects of commanding, controlling and sustaining air power in such a complex and dynamic environment. The possibility of this sort of international intervention occurring again can never be discounted. Similarly, the possibility that the RAAF may be involved in a multinational coalition for such purposes also cannot to be discounted. So we have a very real and pragmatic interest in the air campaign over Libya last year and we look forward to the insights of our presenters today. And we are indeed very fortunate to have an impressive selection of officers to discuss their participation in the Libyan campaign from their national perspectives. Each, I am sure, will bring their particular view to that discussion.

I note that there is a General present, who has mentored me in the past and continues to do so, and one of the first things he said to me was that coalition warfare is not so much about command relationships as it is about relationships amongst commanders.

So, with that, I will hand over to Air Commodore Andrew Dowse. I wish him success as our moderator today and, with you, I very much look forward to today's proceedings.

The Lessons of
Operation *Unified Protector*:
Libya 2011 – United Kingdom

Air Commodore Edward Stringer

Introduction

Chief of Air Force, distinguished guests and colleagues, good morning, and thank you very much for inviting me to speak today. I follow an excellent series of presentations yesterday and I could spend the next 30 minutes developing direct answers to some very intelligent questions posed by yesterday's speakers. Yes, in NATO's Combined Air Operations Centre (CAOC) we did discuss ethics and the reasonable presumption of success behind our strategy. Yes, we did discuss who the air component's cognitive 'force on mind' strategy was aiming to coerce. But let me remind us of the written aims of this conference beyond the banner headline of 'Coercive Diplomacy' as a term, and that is to investigate the use of air power in Libya within the general coercive strategy employed by NATO, and that, to me, is linking air power to policy.

This morning I would like to cover the operations in Libya via a quick narrative of how key events unfolded, then look at the major national strategic lessons, and also what lessons come out from a purely air power perspective.

I was the UK's Air Component Commander from the start of the NATO operation until mid-June, based at the coalition's Air Headquarters at NATO's CAOC 5 in Italy. For the 10 days before that I had been the Chief of Joint Operation's man in theatre, working on the command and control (C2) arrangements as we transitioned from the US-led *Odyssey Dawn* to Operation *Unified Protector*. My day job before deploying in mid-March, at eight hours notice, was Commandant of the Air Warfare Centre, which, with its responsibilities in intelligence and electronic warfare, prepared and supported all arms of the armed services involved in the Libyan operations. Finally, I had been part of the Assistant Chief's team working on our strategy development and specifically Combat ISTAR. Libya has tested and largely proved the theory.

From the perspective of those positions held, I think that four essential themes will emerge from my remarks this morning. They are: speed of reaction, precision in action, the maintenance of political options, and the ability to rapidly integrate within a coalition.

Deference

As a brief digression from the main event under discussion—the 'protect the people' Operation *Unified Protector*—it is worth a brief reminder that we started these operations acting in a national capacity with an evacuation of British citizens and other 'entitled persons' from the Libyan desert. These operations are non-discretionary for a government, and can often be called with little warning—as this one was. They require us to quickly build an intelligence picture, which means we need a range of capabilities across the intelligence disciplines—from the human interactions of diplomacy to the highly technical area of electronic intelligence. In this, air and space platforms play a dominant part. The UK's ability to rapidly fuse these strands together to build a picture that was good enough allowed us to carry out the mission at an acceptable level of operational risk. It reinforces the need to maintain effective 24/7 global intelligence with the flexibility to swing our focus in short order.

United Nations Security Council Resolution 1973

However, as I said, even in the UK that operation is now largely forgotten and academic and political interest has shifted to the successful NATO-led campaign. Hindsight always simplifies, as the human brain seeks ex-post facto narratives, and events can come to seem predetermined. It is worth then remembering that after a few months of Operation *Unified Protector* there was much talk in the international media of stalemates, and questions over whether or not there was a military solution. Such talk presupposes certain clear end-states; end-states that are obvious with hindsight. It is important, therefore, to set out not only what the military line of operation did and did not achieve, but what it was expected to achieve in the first place. And we must also appreciate that campaigns develop as political and military dynamics change. Strategy is the link between policy and operations. It is a two-way link: of course policy informs operations, but the conduct of those operations then influences and shapes the policy space. One must remain strategically, and conceptually, agile. This is one of the most important political lessons for air power exponents, and one we will return to shortly.

So, how did the campaign develop? I do not intend to conduct a narrative history of the whole campaign, but I do want to explore that link between the conduct of operations and policy, and to avoid merely making assertions we need to look at some key events.

Preventing a Massacre

The threat of a massacre in Benghazi, and other cities or regions rebelling against the Gaddafi regime, led to United Nations Security Council Resolution (UNSCR) 1973 and the military action instigated by the US, France and the UK. At the time our Government was clear that the end-states could not be defined precisely, and that once military action is embarked upon then it tends to develop its own

dynamic. But the humanitarian case was compelling and justified the risk. Set against this benchmark, the military operation was successful by early May—after the initial few weeks the regime's forces were blunted to the extent that they could no longer threaten these cities or their populations. Over the remainder of the campaign, the coalition further eroded the Gaddafi regime's power to harm the population—the regime was, to us, obviously on the back foot for some time before recent events made that explicit. Throughout that time we have had to adapt as the ground battle became increasingly irregular—that was also to a great extent as a result of the success of air power. The regime forces had to tone down and hide, with obvious knock-on effects for their combat power.

At this stage various commentators pointed to static front lines and predictions of stalemates and quagmires emerged. Those were simplistic extrapolations of tactical outcome into the strategic level. At the strategic level things looked a little different. Significant political forces were coming into loose alignment: China backed away from its stance of opposition, Russia came onside against the Gaddafi regime, if still reluctant to sanction the methods, and Turkey set its stance for the NATO operation and decidedly against the Gaddafi regime, where previously it had been more neutral. Within the coalition, at the 90-day review some of those member states who had deployed forces with caveats on their use—for example, only flying missions in support of the no-fly zone and not the 'protect the people' operation—quietly dropped their caveats. All the political signals were positive.

From that point events moved quickly, as the opposition forces became better organised and more confident, and the Libyan population began to lose the fear factor that 42 years of authoritarian rule had instilled. Tripoli fell in August.

If that is the 'what' of the campaign, then what is the 'so what'? Well, this was not a military campaign against the Gaddafi regime—NATO did not set out to defeat Gaddafi's forces militarily. We set out to create the conditions by which a political solution could emerge—a solution decided upon by the Libyan people themselves once they had the freedom to make a choice. That solution was bound to have a regional dimension, as regional politics influenced the Libyan polity. So it follows that the diplomatic and economic levers of national power, that is the political forces, were always going to be dominant. And this also explains why Qatar, for example, was such an important actor in this affair.

The effectiveness of the military line of operation, the military lever if you like, should be judged on how well it set the conditions for these other levers to be mobilised and take effect. And this gets to the heart of the subtitle of this conference: 'Air Power and Coercive Diplomacy'.

NATO did not set out to remove Gaddafi from power. Much initial discussion revolved around the necessity of maintaining an even-handed position. The 'protect the people' operation was just that. By the 90-day point, and NATO's operational review, we had avoided any nasty political messes. We had not suffered any own

casualties, and had not caused any significant civilian casualties. Indeed, the press, which always looks for collateral damage, was surprised by its absence and impressed with NATO's restraint. Clumsy attempts by the Gaddafi regime to suggest that there had been civilian casualty incidents backfired, and the press became cynical of the Libyan claims. NATO was winning the battle of narratives. It was looking restrained and competent; Gaddafi was looking murderous and desperate. It was against this backdrop that the strategic events already mentioned played out. An effective and efficient conduct of operations, and the absence of any significant political messiness or friction, had opened up the policy space. By now, all reasonable commentators had realised that Gaddafi could never resume his place in the international community, and political leaders could now openly talk about Libya's future being a post-Gaddafi one. NATO's operations could now more deliberately target Gaddafi's power to oppress and control, but it must be stated that, contrary to some popular assumptions, NATO's air forces never became the Free Libyan Forces air arm.

If I refer back to the stated purpose of this conference, it refers to the place of air power in the coercive strategy adopted by NATO. I would make three points about the use of air power, and they all flow from the previous discussion:

- Firstly, that NATO needed to maintain a distance from the internal Libyan political struggle. Air power, alongside intelligence and other specialist, niche military skills acted as a condition setter but it did not become part of the problem itself, allied to any particular actor. Once those political conditions were set then a decision emerged relatively quickly and, most importantly, it was a decision made on the ground by the Libyans themselves. It is the Libyans who owned and still own the outcome, for better or for worse. Of course, one could also point out that that distance allowed us to disengage very quickly indeed, leaving Libya to the Libyans.

- Secondly, by maintaining that distance we maintained and expanded the policy space as the campaign developed. Thus a more coercive strategy could eventually be employed that allowed a political decision to emerge.

- And, finally, NATO's strategy development was led foremost by airmen, who need a strategy-to-task chain as a fundamental core of their modus operandi. The strategy that eventually proved successful, a coercive 'force on mind' strategy aimed at removing the Gaddafi regime's power to harm the Libyan population, was generated in the Air Component Headquarters.

To sum up the argument so far, I consider that the military line of operation in blunting Gaddafi's power and hold over his population, as well as fulfilling the initial humanitarian requirement, set the conditions for political success. What were the necessary attributes of that military line of operation that allowed us to get to that position? We will see that the majority relate to the air environment.

Speed of Reaction

The first attribute was speed of reaction. Had we arrived over Libya after Benghazi had been retaken it would in all likelihood have been too late. Thus speed of reaction was an essential attribute. If we look at the timescales they are impressive; the UNSCR passed on 17 February, our aircraft were put on notice to move on the 18th and our first strikes sorties were airborne on the 19th. These were launched from the UK, against targets on another continent, with our aircraft landing at foreign bases from which they were ready and rearmed in very short order.

For four days the Typhoon force maintained its operational tempo with only 31 ground crew deployed. The first sorties were effectively launched off aircrew turnrounds. There is not time here to look at all the pieces that have to come together to achieve this—from intelligence of Libyan air defences, through mission planning and targeting, to the expeditionary ability to set up and operate logistically from another country in a matter of hours. Suffice it to say that our ability to move so quickly, even when stretched in other theatres, was remarkable and has surprised even some of our own across UK Defence. It requires physical and mental agility to react to the unforeseen, to maintain a credible contingent capability. This is a cultural trait that must be nurtured but has again proved its worth: such speed of reaction gives governments options.

Precision of Effect

The second necessary attribute is precision, and precision is a mindset as much as a technical capability.

Now, precision is not the same as accuracy; after all, one can accurately hit the wrong target. Accuracy is still important though—and the investment over the years in guided weapons systems and the training of the crews has allowed us to achieve a success rate I would have found incredible at the outset of the operation. We achieved a greater than 99 per cent success rate against fixed, pre-planned targets, and Brimstone achieved almost the same in striking dynamic, mobile, and even moving targets, achieving 98 per cent.[1] Remember that Typhoon entered theatre without a declared air-to-ground capability. But that is not the essence of the story, as we could have achieved similar results tactically and yet still failed strategically had we been routinely inflicting collateral damage. Precision is finding and striking only those targets we should, achieving the effect we seek using the minimum amount of force, and tightly controlling that use of force to cope with the unexpected and avoid the unwanted. This puts an emphasis on intelligence and persistent surveillance and reconnaissance. As you would expect, we modelled each target and the likely effect our weapons would have on it and its surroundings.

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1   Brimstone is an air-to-ground precision attack missile developed by MBDA Missile Systems for the RAF.

But we also used persistent ISR to establish pattern of life—what goes on around this target in the real world not the abstract, modelled one. Combine the two and you can thread precision weapons through that pattern of life to hit the particular part of the target you wish to strike. And you try and control that all the way to weapon impact, aborting attacks when it is right to do so. We are already working on the lessons in this area.

Let me give you some examples:

- In Misratah we found that the regime was using multistorey buildings as, effectively, siege engines—firing multi-barrel rocket launchers (MBRLs) from the upper floors horizontally, at short range, into Misratah port. Where usually we would try and avoid targeting buildings that could be dwellings, in this case persistent ISR, over many days, had established the pattern of life and that no civilians remained in the area. We then used very sophisticated *weaponeering* to put bombs deliberately through sections of the roof such that they would penetrate down to the floors we wished to hit. We maintained our surveillance and built up a picture of the regime forces' modus operandi, working out where the command nodes and logistics hubs were. We then took apart this structure. A few days later the regime pulled out of Misratah.

- Secondly, let us revisit the well-reported attack on the Libyan Navy, which had again become a threat, using fast RHIBs (rigid-hulled inflatable boats) to mine Misratah harbour and, when filled with a ton of explosives, to threaten shipping. The accuracy of the attacks was well publicised. Of more importance in a campaign aiming to influence a range of actors, there were no casualties caused and credible reports subsequently that groups of Libyan sailors were disciplined for rejoicing too openly that their ships had been hit.

- Finally, there was a radar in the port of Brega. Its use could have compromised NATO naval forces, and so the air component took it out. The only weapon that could meet the collateral damage criteria was a Brimstone from a Tornado aircraft. A single weapon did the job, and we had used messaging to ensure no civilians were in the area. In fact, we believe that no individual was harmed as a result of this attack despite it being in the centre of a dual-use port.

All these disciplined uses of force, with supporting messaging, painted a picture of the coalition as a disciplined military organisation, using force in a controlled manner at a time and place of its choosing. In so doing we supported the coalition's political messaging and presented an alternative to the way the regime terrorised its population. By demonstrably doing everything possible to avoid civilian casualties, the coalition protected the legitimacy that was its bedrock. My contention is that the military line of operation was never going to be decisive—

but it bought the time and space, and set the conditions, for the political lines to be effective. And that approach, essentially providing asymmetric assistance while relying on indigenous forces to own the problem and its solution, kept our own political options open: the Government always had a way out.

The military lesson is that effective use of force in such operations can only take place within a sophisticated intelligence and targeting cycle. That targeting cycle has to integrate the controlled violence of the kinetic effects with all the non-kinetic effects in the information operations locker. The messaging must be plausible and consistent.

The strike missions I have used as exemplars catch the imagination with their graphic footage. On the other hand, ISR operations are not photogenic. Although I have covered the targeting cycle, it is worth mentioning the force multiplication potential of ISR used well and with imagination. During this campaign we have used Sentinel aircraft to hold the line and screen the flanks in some of the most critical regions. Should one of these priority areas suddenly become hot, then Sentinel would identify the ground activity and fast air could be redirected quickly from almost anywhere in Libya. In fact, US ISTAR chiefs commented that Sentinel provided the great bulk (about 80 per cent) of the raw intelligence for second and third phase exploitation that built our picture of the regime's modus operandi. Similar arguments can be used for remotely piloted air systems (RPAS), which exert a powerful psychological effect and whose mere presence, or assumed presence, has a suppressive effect. They can be considered excellent 'ground holding troops', preserving gains, while fast air is the first echelon force, or quick reaction force, survivable in the more hostile areas, quick to respond and flexible. Thus the lesson that comes out of Operation *Ellamy* is that no one system is predominant, but get the balance right between your ISR, RPAS and fast air platforms and significant efficiencies can accrue. This is important in an age as notable for its austerity as its uncertainty.

NATO Achievement and Conclusion

I have concentrated here on the intelligence and strike operations, as they tend to grab the headlines. But we must not forget the supporting activity on which all this depends. NATO's southern flank did a remarkable job in taking on the US-led *Odyssey Dawn* and adapting to run a complex intelligence-led operation such as Operation *Unified Protector*. The CAOC's peacetime staff of around 100 had to expand, under the admirable leadership of General Jodice, nearly fourfold to do so. But this has, of course, thrown up some lessons for NATO members. Lessons spelt out by US Secretary of Defense Gates in his speech to NATO in early June.

So perhaps the biggest strategic lesson is the position taken by the US—this is the first operation I have been involved in that was not unequivocally led and resourced by the Americans. They had, however, to provide the bulk of the

tanker fleet, the joint personnel recovery and the SEAD (suppression of enemy air defences) capability. And NATO is still reliant on the level of intelligence that comes from the 5-Eyes club.[2] That put an onus on those nations who can step up and take a leadership role, not least in the provision of ISR, targeting and information operations that are the foundation of the campaign, and are the basic building blocks of strategy. These are the serious war-fighting capacities that are not obvious or well understood, but are vital. In this operation the UK has demonstrated that it retains those serious capabilities—capabilities that often are embedded in our people, and so require us to invest in the moral and conceptual pillars of combat power as much as the physical. We now need to spend some energy on the conceptual pillar and look at the lessons of working, and sharing, in broad-based coalitions beyond NATO. And we also need to ensure that we have the capacity, as well as the capability, to generate intelligence-related products at the rate required in the absence of a US lead.

At the political level we have relearned the importance of NATO as a regional political organisation with real weight, one to which other coalition partners could accrete and which provided a suitable level of international political oversight without which our legitimacy could have been questioned. We will be leaning into NATO more forwardly in the future.

In conclusion, the Libyan operations have demonstrated the need to maintain high-readiness air forces to preserve strategic options. They have shown that a sophisticated intelligence and targeting cycle is as essential as the ability to drop ordnance accurately. They have demonstrated that our high-tech capabilities can be used to apply leverage to a political situation without our necessarily having to commit ground forces—with all that that entails. They have demonstrated the continuing relevance of regional alliances, in our case NATO. And, finally, they have shown that we have to invest in contingent capacity as well as capability, and not presume that the US will always bail out the alliance.

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2 The 5-Eyes club is a multilateral agreement between the United Kingdom, the United States, Australia, Canada and New Zealand for the purpose of sharing intelligence, especially signals intelligence.

Lessons from Operation *Ellamy*: Implications for Amphibious Aviation – A UK Perspective

Commander Jol Woodard

Chief of Air Force, distinguished guests, ladies and gentlemen, may I say what a distinct honour it is to be stood here in front of you and may I also take the opportunity to extend my personal thanks to the organisers and, indeed, to the hosts for making our hospitality here second to none.

It is my pleasure this morning to share with you some of my reflections as the Air Group Commander onboard HMS *Ocean* during Operation *Ellamy*, the UK's contribution to Operation *Unified Protector*. Overnight on 3 June last year, a pair of Apache attack helicopters launched from the deck of HMS *Ocean* and transited low level under the cover of darkness some 20 miles to the coast of Libya in the vicinity of Brega to destroy a radar antenna. The package was launching, as we then presumed, into one of the highest aviation threat environments we had experienced in recent decades. And the mission was planned to take place coincident with a raid by a potent package of Gazelle, Puma and Tiger helicopters from the French Helicopter Strike Group from the French ship *Tonnerre*. These missions represented not only the first attack helicopter strikes by the French and the British Maritime Task Group as part of Operation *Unified Protector* but, for the UK, they signified the first-ever use of Apaches in a strike from the maritime role. Given that the deployment had started just a month earlier as an amphibious training exercise (Exercise *Cougar 11*) this was some turn of events and, as the Chief reminded us yesterday, it is probably another reminder that flexibility is indeed the key to air power.

The aim of this presentation is to talk about some of the key activities undertaken within HMS *Ocean's* Air Group as part of Operation *Ellamy*. However, given the ADF's focus on amphibious development, I have been asked in particular to consider any lessons that can be drawn out that may have relevance for amphibious force development. With Operation *Ellamy* being a strike operation, you might think that that is not an intuitive step, to extrapolate lessons on amphibious operations. However, the link is actually closer than you might think if one considers it from the perspective of being a joint aviation operation involving the integration of different aircraft and people from different Services in what, for many, was an unfamiliar environment, to provide a versatile capability in a

complex and rapidly evolving operational context. Now in that sense, I think the parallels are pretty clear.

I am dragging you right down to the low-level, tactical 'weeds' now, although I believe some of the implications I draw out certainly have resonance up at the operational and, indeed, the strategic level. And, to my relief, as I listened to some of the speakers yesterday, many of my observations I think chime with some of the comments already made. So to achieve this leap of faith, I am going to start by explaining to you what the Response Force Task Group actually is. I will cover the initial deployment aims and the scheme of manoeuvre, and then explore how that was revised in the face of the 'Arab Spring'. I will briefly summarise the Air Group activity before then going onto the meat of the talk, which will be discussing the implications for amphibious aviation.

As part of the UK's 2010 Strategic Defence and Security Review,[1] the UK's Carrier Strike Group and Amphibious Task Group were merged into one task group known as the Response Force Task Group (RFTG), under the command of the Commander UK Task Group. The RFTG is designed to be a scalable, maritime task group that forms the majority of the Royal Navy's contribution to the UK's responsive force. Specifically, a very high readiness maritime task force based around a commando group littoral manoeuvre capability and, upon introduction, of a Queen Elizabeth class delivered carrier strike capability.

So, with the withdrawal from service of HMS *Ark Royal* and our Sea Harriers, the focus of the RFTG is to be on littoral manoeuvre operations until the introduction of our new carrier later this decade, or at least that was the theory. On that basis, RFTG's littoral manoeuvre mandate last summer was to conduct joint action through ship-to-objective manoeuvre of an assault echelon of one commando group in a single cycle of darkness. The initial assault wave was to secure identified objectives and comprised simultaneous delivery of one company group by air (approximately 130 personnel) and a company group by surface, capable of sustaining combat operations independently for 28 days. To achieve the aviation elements of that task, we employed what we call a Tailored Air Group (TAG), a mix of lift, find and strike helicopters, with the package tailored to meet the requirements of any particular deployment. So Exercise *Cougar*, in which form Operation *Ellamy* began for the RFTG, was to be one of the key building blocks to regenerating that littoral manoeuvre capability.

There were a number of parts to the exercise but, for the purposes of this talk, I am going to concentrate on the amphibious aviation aspects for which HMS *Ocean's* Air Group was deployed. Due to commitments in Afghanistan, the majority of the

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1   HM Government, *Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review*, The Stationery Office, London, 2010.

rotary wing assets had been made available for just a concentrated seven-week period, which was due to run from 26 April through to 15 June 2011.

Although short, the scheme of manoeuvre contained everything required for a littoral manoeuvre regeneration package, comprising combat enhancement training in the UK, an exercise with the Italian Navy, and an exercise in the Albanian littoral during which the RFTG was to be formally validated. The Air Group would then return to the UK onboard HMS *Ocean* no later than 15 June. The TAG would consist of four Sea King Mk 4s, three Lynx Mk 7s and three Apache AH-64s.

Including engineering and support teams and a couple of fine Royal Australian Navy liaison officers in my squadron, the Air Group comprised almost 200 personnel from the Joint Helicopter Command. With no other choice due to the range of concurrent activities supported, many of them (myself included) had returned from Afghanistan only a few short weeks prior to the deployment. Whilst far from ideal, with the *Cougar* deployment due to last just seven weeks, the impact was considered acceptable. However, as events played out, this would become rather more of a factor than we initially thought.

As April drew closer, the Arab Spring began to have an inevitable impact on the scheme of manoeuvre. First, the RFTG was directed to deploy for up to six months and it was then divided into two, with a spearhead element sailing some three weeks early. This vanguard group pre-positioned in the Mediterranean and worked up early contingent capabilities to provide political choice for the UK Government. Although the remainder of the main body, including HMS *Ocean*, sailed on time, the scheme of manoeuvre altered fairly dramatically. The UK work-up was reduced from two weeks to just three days, followed by a fast passage from the UK to Cyprus during which further, albeit limited, individual and unit training took place. The RFTG re-formed en route, reintegrating the vanguard group and, with the Italian exercise cancelled and the Albanian validation phase significantly detuned, the littoral manoeuvre regeneration was compressed into just one 10-day exercise in Cyprus.

With real world events now beginning to crystallise political intent, the RFTG was placed under the operational control of Commander Joint Operations on 23 May. This formally marked the shift from an exercise footing to an operational one. At the same time we were ordered to conduct a mission rehearsal exercise to prepare the Task Group for potential strike operations into Libya. We duly did so, also in Cyprus, although at that stage from an aviation perspective there were no missions and tasks for the Air Group nor was there any detailed information available as to exactly where we might be operating. As a consequence, we were forced to make some fairly bold assumptions in terms of our likely roles and tasks. The most worrying element to us was the provision of accurate intelligence, not helped by the absence of a coalition Land Component Commander, on the threat

to the aircraft in the low-level environment in which we would be operating. Much of the focus of the package was on judgemental training to ensure that the crews properly understood the nuances of the rules of engagement, fully aware that our main effort was the protection of civilians and not tactical attrition, as I am sure Professor Enemark will be reassured to hear.

We were pretty clear that the main utility of the Apaches within the overall air campaign was going to be their psychological impact, or their cognitive effect, rather than tactical attrition. This supposition was soon proved correct through intelligence reports suggesting that not only was the presence of the Apaches unnerving pro-Gaddafi forces, but their role as part of the wider Task Group was keeping those forces guessing. Fairly early on we were informed that pro-Gaddafi forces believed us to be preparing to conduct an amphibious assault in the vicinity of Brega, which usefully diverted a number of their forces to that area and fixed them there for some time. On another occasion we were fed reports suggesting the Apaches were in the process of conducting a devastating attack on the town of Misratah, yet not only could we clearly see our aircraft strapped to our deck undergoing maintenance operations, we were in a completely different area. Given the aviation threat environment, we were never going to be able to harness the full utility of the Apaches in their designed find and strike role. Other ISR assets were instead required to find the targets and then the attack helicopters would be cued onto them.

Thus, tactical attrition was never the main effort of our Apache strike package, as the statistics demonstrate. Of 47 missions planned, 22 were flown and of the 25 not flown, 20 were due to a lack of an identified target and the remainder due to weather. Now that is not to underplay, by any stretch, the success of the 22 missions flown, with target sets destroyed including technical vehicles, buildings, armoured vehicles, anti-aircraft positions, and inflatable boats, as well as a number of man-portable air defence systems (MANPADS) and command and control nodes. In all, over 350 targets were successfully engaged, representing approximately 17 per cent of the total targets engaged by UK assets, which is quite a feat for only five aircraft, not to mention the psychological impact that I discussed earlier. The utility of this strike package was perhaps best demonstrated on the night of 12 June when a combination of submarine indicators and warnings, and Sea King airborne search and control, pattern of life enabled the cueing of attack helicopters to an engagement on two special forces RHIBs that had been used by pro-Gaddafi forces to run supplies up and down the coast. Following a successful engagement, the attack helicopters then reset on *Ocean's* deck and later that night launched on a deliberate mission as part of the Air Tasking Order (ATO). This was success of a truly joint and combined nature.

These missions continued until 23 September, when *Ocean* and the remainder of the TAG were redeployed to the East of Suez to support other contingent tasking;

finally, returning home on 9 December, after not seven weeks but some seven and a half months at sea.

Now using that whirlwind summary of the operation as a context, I would like to draw out some implications for amphibious aviation. The areas I am going to cover are:

- force generation,
- people and task group integration,
- the criticality of availability of decks and helicopter landing spots,
- the implications of marinised versus optimised or ship-adapted aircraft, and
- logistics.

So, starting with force generation. On the face of it you may see that we moved from a littoral manoeuvre training exercise to strike operations in the space of just seven days, with little detailed planning or experience. However, the reality is very different. This success did not happen overnight, but was instead the result of many years of force generation and investment.

Arguably, preparations for Operation *Ellamy* began back in 1995 with the signing of the memorandum of understanding (MOU) between the Army Air Corps and the Royal Navy for attack helicopter operations at sea. Admittedly, the progress was somewhat staccato due to the wider commitments and the next event was not until 2005 with the Initial Operating Capability (Maritime) of the Apache onboard HMS *Ocean* in 2005. This allowed the critical drafting of attack helicopter doctrine, which then formed the platform for further, more frequent training from 2009 through to the present day. In 2009 there was a focused 'train the trainer' package conducted by a number of helicopter instructors, and in 2010 the Officer Commanding the Attack Helicopter Maritime Strike Squadron embarked to observe an exercise in the Atlantic. Later in 2010, the attack helicopters embarked with personnel in HMS *Ark Royal* during Exercise *Joint Warrior* in the UK waters, all of which served as essential training for command planners, aircrew and ground crew alike. Then, of course, as I have briefly summarised there was the initial training conducted during Exercise *Cougar*. Despite a curtailed scheme of manoeuvre, we did achieve individual and unit level training during the passage followed by the 10-day amphibious package in Cyprus, which allowed for vital integration training both within the Air Group and, importantly, across the Task Group as a whole. So focused force generation was achieved and was crucial to our ultimate success.

However, force generation was just a first building block and I would argue that more of a key to our ultimate success was integrating the fledgling Attack helicopter capability—many of whom were experts in the land environment but not so in the

maritime—into a more experienced maritime force, and that is all about people. More specifically, it is about having suitably *qualified* and *experienced* people in all the right places. We abbreviate this, because we love abbreviations, to SQEP.

SQEP is fundamental to force generating effective joint aviation from the maritime domain. In other words, the operation of different aviation elements from different Services at sea. Whether that be in the delivery of strike operations or amphibious activity, suitable personnel need to be positioned in the aviation planning teams, the cockpits, the hangars, the formation commands, the maritime and land force battle staffs, the force generation headquarters, the CAOC and coalition partner headquarters. On *Ellamy* we did just that. We set up a number of liaison officer posts and, whilst painful to do in being a significant manpower drain, we made sure we placed our best people in those liaison roles. So, given the resource burden, how in the UK do we go about generating the suitably qualified and experienced personnel for LitM aviation operations? We have the luxury of two bespoke aviation organisations to do this.

Firstly, the two-star Joint Helicopter Command, which brings together under one joint organisation the battlefield helicopters from each of the three Services. It maintains single Service ethos within a joint organisation and provides a balance that synergises single Service capabilities, allowing aviation assets to be employed in whatever environment they might be required. Then for littoral manoeuvre operations specifically we have the Commando Helicopter Force, the Royal Navy element of the Joint Helicopter Command, which serves as a UK specialist amphibious aviation and command node. With four helicopter squadrons, a combat service support squadron and its own headquarters element, the Commando Helicopter Force (CHF) provides the command and control (C2) and liaison functions essential for the effective use of helicopters in the littoral plus, importantly, all the enablers required to support those aviation elements. The Commando Helicopter Force also facilitates the generation of suitably qualified and experienced people, who are posted into key areas to provide integral aviation advice and participate in the planning and estimate process at all stages and at all levels.

Now a good example from *Ellamy* of why the presence of the right people in the right places was vital is to look at how the Air Group changed in size and shape in response to developments in the scheme of manoeuvre that I have outlined. As I said, we began with four Sea King Mk 4s, three Lynx Mk 7s and three Apaches, but the Air Group was split even before deployment with elements of the Lynx Mk 7 and Sea King Mk 4 detachment deployed with the vanguard group. We also inherited a maritime Lynx Mk 8 due to a lack of other decks (TAG#1). Then, upon switching to an operational footing, the Task Group was split with a small element deployed in support of the detuned Albanian exercise and we inherited two Sea King Mk 7 Airborne Surveillance and Control (SKASaC) helicopters (TAG#2). We were also soon to swell the attack helicopter ranks from three to five (TAG#3).

But this was not the end of the transformation as, by early June, the Sea King Mk 4s were extracted from the deployment to furnish higher priority operational commitments, and the lack of an organic joint personnel recovery (JPR) capability led to the embarkation of three US HH-60 Pave Hawks (TAG#4). The Air Group thus swelled to consist by mid-June of five different aircraft types and over 250 personnel, not only from across the three Services in the UK, but also from the United States.

Now I do not believe that such a transformation in size, shape and, importantly, role of the Air Groups could have been achieved without detriment to output or safety without having the right people in the right places. Also of critical importance was the fielding of an Air Group Headquarters, which primarily consisted of Commando Helicopter Force personnel. They first ran pre-deployment training and then embarked in *Ocean* to cover all the functional areas onboard, providing what we like to call a 'plug-and-play' option. Through detachment commanders and role-specific operations officers, each aviation detachment plugged into the Air Group Headquarters. The Air Group Headquarters, in turn, then plugged the Air Group into HMS *Ocean's* well-trained and worked-up air department. In that way, we absorbed, mentored and advised those not skilled in maritime standards and practices at every turn and at every level. Pre-deployment 'roadshows' also helped to build relationships and understanding across the Task Group as a whole and proved invaluable. Now, traditionally in the UK we have deployed a TAG Headquarters solely in the context of littoral manoeuvre operations but following our experience of Libya I suspect we will now give serious consideration to its deployment as part of any RFTG, given the flexibility it provides in the face of the uncertainty of contingent operations.

Next I want to emphasise the importance of having sufficient decks and landing spots available to generate the necessary operational tempo. By mid-June, with the split of the Task Group and the need to routinely deploy the remaining fleet auxiliary on logistics runs because of the extended logistics line of communication, we had no spare aviation deck in the Task Group. Aside from the obvious flight safety implications, this could have been a serious constraint on the operation. As it was, because of the deliberate nature of the strike operations tasking, sequenced as it was through the ATO cycle, and because of an extremely well worked-up deck crew, we got away with having just six spots available. However, had the nature of the mission been different, we would not have been so fortunate. Take, for example, Operation *Telic*, the UK's aviation assault into Iraq back in 2003. In this case, we had an Air Group that consisted of four Chinooks, ten Sea King Mk 4s, six Lynx Mk 7s and six Gazelles.

Obviously this was a far larger Air Group than that used in Libya, but the most important difference was the need in Iraq to generate an assault wave that consisted of many more aircraft than we had spots available, and with a landing force split across a number of ships. Critical to the success of the subsequent assault onto the

Al Faw Peninsula was the ability to utilise other decks, such as HMS *Illustrious*, to shuffle aircraft and troops as part of the preparatory operations. Now, although 2003 was an age in which we in the UK conducted brigade level operations and, as I mentioned at the beginning, our Strategic Defence and Security Review has reduced us to commando group operations, the principle remains absolutely the same. Without sufficient spots and decks you cannot generate deck tempo and, without that, aviation becomes a constraint on operational tempo rather than either an enabler or a force multiplier.

Also related to tempo is the question of aircraft marinisation. Now budgeteers might argue, and they more often than not do, that investing in marinised aircraft is not cost-effective if they are only to spend part of their time at sea. Now that may be true, but in the analysis one needs to carefully consider the implications of operating with non-marinised aircraft, as doing so brings with it significant risk for maritime operations. This was born out during *Ellamy* where the majority of aircraft in the Air Group were neither ship-optimised nor marinised, and this had a direct impact on our ability to generate tempo. Unlike the Royal Navy Sea Kings and the Lynx Mk 8s, which were marinised, neither the Apaches, the HH-60s nor the Lynx Mk 7s were equipped with the likes of rugged undercarriage, flotation gear, transponders, lashing points or environmental protection. This vastly constrained our operating envelope and significantly increased the maintenance burden, as well as bringing into play a number of important safety considerations.

In *Ellamy* we were blessed with operating in summer Mediterranean conditions with an average sea state of 'one' to 'two' and a pitch and roll of about half a degree. The attack helicopters, with their narrow undercarriage, high centre of gravity, limited environment protection and poor underwater escape characteristics, could never have coped with adverse weather conditions. Furthermore, if you have an aircraft that cannot fit into the hangar, then ground crew have to engineer that aircraft whilst on the deck, which can be extremely hazardous and at times unworkable. Despite initial intent, we did not have Chinooks with us on *Ellamy* and, given how events turned out, that was just as well. With only one deck available and no ability to have put them into the hangar, they would have ground deck operations to a halt and made this operation untenable. Although they were not an issue on this operation, another consideration for any force in a concept design or force development phase is that ship-optimised or marinised aircraft are more readily air transportable. Their folding heads and blades, and more robust undercarriage reduce both preparation and recovery time for strategic air transport, thereby decreasing their 'in to action' time.

Finally on this topic, as *Ellamy* brought home loud and clear, multi-role aircraft are worth their weight in gold. We had none in the final Air Group and, with each aircraft only able to conduct its primary role, the result was that bespoke spots, plus often a spare, had to be set aside, which with only six available severely limited

our flexibility and ability to generate tempo. So, marinised and multi-role aircraft are invaluable.

That brings me onto the last point which I want to bring out and that is the importance of logistics. The centrality of logistics and the need for an effective supply chain will, of course, not be news to anyone here. I mentioned earlier the need to deploy our remaining fleet auxiliary on extended resupply runs which took her away from the rest of the Task Group for about seven out of every ten days. Not only did this remove the spare deck, but it also highlighted the fragility of such an extended supply chain. HMS *Ocean* required a refuel every 45 days but needed stores replenishment, on average, every five to seven days to sustain operations. With the Royal Fleet Auxiliary so often out of area, this required careful choreography with both the Maritime and the Air Component Commanders to ensure that we did not adversely impact campaign tempo. Another factor was the lack of linear metres (LIMs), which as many of you will know is a form of measurement within a ship for how much equipment and how many vehicles can be stored. In our case, the split of the Task Group meant that much of the equipment so fundamental for amphibious operations departed with those ships. Thus, whilst we rehearsed amphibious raids during the Cyprus exercise, we had no way of conducting such operations in anger due to the loss of our vehicles, tents and other key enablers once the Task Group split. Also on logistics was the importance of having an Air Head, which for us was the sovereign territory in Cyprus. As we transferred from an exercise to an operational footing there was a requirement to rectify a number of significant resource shortfalls, not least in our ammunition stocks. And we ended up, through that Air Head, with just about enough, just about in time.

Now I could go on for much longer but I am conscious that the clock is ticking down. Operation *Ellamy* brought out many other considerations, such as the importance of sovereign territory for expeditionary training; the lack, as I have suggested, of organic joint personnel recovery capability, which required support from other nations; the implications of the lack of ground intelligence or a Land Component Commander; and the insatiable appetite for ISR, all of which were critical factors to us. Whilst I have not got time to cover them now, you may want to pick up on them either in the plenary or, indeed, over a cup of coffee later on. For now, I will close with what I think are the key takeaway points. Operation *Ellamy* took place against a backdrop of an uncertain geopolitical environment, with the Arab Spring leading to a complex, dynamic and unpredictable sequence of events. The availability of a Task Group that helped provide political choice through offering up a variety of maritime military options was critical to success. We in the UK profess to have learned a great deal from this, but, critically, we must ensure these hugely important lessons are retained in our corporate memories for future use, which of course is going to be some challenge. I have outlined some of

the aspects that I think are of greatest importance from an amphibious aviation perspective:

- The long-term investment in force generation; it takes time.

- Making sure you have specialists in the right areas on an enduring basis and, for temporary liaison posts, ensuring that you put your best people into them.

- Having sufficient decks and spots available, or at least being aware of the implications if you do not.

- Ensuring the significance of having the right blend of aircraft in the Air Group is properly understood. Or, again, if the optimum package is either unachievable or unavailable, making sure the constraints on and implications for operational tempo are properly understood.

- And the importance, as always, of logistics.

Operation *Odyssey Dawn* – United States

Major General Margaret Woodward

Air Marshal Brown, distinguished members of the Royal Australian Air Force and distinguished guests, thank you for the opportunity to speak today about Operation *Odyssey Dawn*, the US-led portion of the Libyan air campaign.

Odyssey Dawn shares much in common with previous combat operations in that it demonstrated the extraordinary responsiveness, flexibility, and agility of coalition air power. But it also diverges from previous operations enough, particularly at the strategic level, to justify additional consideration as a possible template for future conflict.

Regardless, like all successful air campaigns, *Odyssey Dawn* at its core is about superbly trained, highly skilled and courageous airmen who met every challenge they were given. Thank you again for allowing me to tell you their story.

On 18 December 2010, political protests began in Tunisia that led to one of the most rapidly developing movements toward regional democracy in history. Dubbed the 'Arab Spring', courageous citizens challenged established autocracies across North Africa and the Middle East. Over the next six weeks, we monitored the unfolding situation and primarily prepared to support the State Department with Non-Combatant Evacuations and Humanitarian Assistance.

On 15 February 2011, armed protests spread to eastern Libya and three days later, protesters known as the 'opposition' took control of the eastern city of Benghazi. Even as the opposition gained momentum, Colonel Gaddafi and his regime continued to brutally fight to maintain and regain control of the country. On 21 February, our State Department ordered the evacuation of American citizens. Two days later, international concern grew after news reports of hundreds of protesters killed by Libyan air strikes in Tripoli and when Gaddafi ordered his army to hunt down and execute protesters door to door following heavy fighting in Benghazi.

February 25th marked a significant turning point in our relationship with Libya when we completed the evacuation of US citizens and President Obama signed an executive order initiating US sanctions targeted at the Gaddafi Government and condemning the 'violation of human rights, brutalization of its people, and [the]

outrageous threats [that] have rightly drawn the strong and broad condemnation of the international community'.[1]

On 26 February, the United Nations adopted Resolution 1970 which, among other things, demanded an end to the violence in Libya, referred Libyan acts of aggression to the International Criminal Court, and called on all states to provide humanitarian assistance to the Libyan people. Almost simultaneously, we received our first planning guidance, directing us to deliver plans for a no-fly zone to US Africa Command and the Joint Staff within 36 hours. As a result, 17th Air Force initiated 24/7 operations and began planning in earnest for what would ultimately become Operation *Odyssey Dawn*.

From the start of crisis action planning to our first strikes in Libya was only 21 days. Further complicating the brief planning time line was the fact that Libya had not been viewed as a potential adversary by most defence and intelligence agencies for years, making operational data and intelligence one of our earliest and most critical limiting factors.

In addition, given the enormous risks associated with conducting military operations of any kind in Libya and the complex and competing national interests at stake during this time of spreading revolution in North Africa, almost no-one in Washington publicly seemed to believe we would actually execute this operation. As a result, almost every day brought new planning guidance with new objectives, approaches and priorities.

All this and much more made the 21 days immediately prior to *Odyssey Dawn* immensely challenging. This challenging environment had a significant impact on how we developed plans, obtained resources, and ultimately employed air power in Libya.

Would we have liked more time to plan? Yes. Would we have liked a more refined end-state? Certainly. But we understood why these things were not forthcoming and regardless, history is clear, this operation was a great success. It was a success because the entire joint and coalition team was flexible, disciplined, professional, and highly responsive to rapidly changing guidance and conditions. And it was a success because, when all was said and done, air power decisively stopped the Libyan regime from massacring tens of thousands of Libyan citizens in Benghazi without the loss of a single coalition serviceman or woman. The bottom line is that *Odyssey Dawn*, once again, proved that air power provides our leaders sovereign options they simply cannot get anywhere else.

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1   President Barack Obama, 'Statement by the President on Libya Sanctions', The White House, 25 February 2011, available at http://www.whitehouse.gov/the-press-office/2011/02/25/statement-president-libya-sanctions, accessed 20 August 2012.

From the beginning of crisis action planning, it was evident to us that any course of action involving a no-fly zone would require establishing air superiority and freedom of manoeuvre.

To achieve these things, we needed to eliminate the threats posed by a fairly robust Libyan Integrated Air Defence System and a relatively incapable but still potentially lethal Air Force. In addition, our view of the mission led us to believe that sustained precision engagement with regime ground forces as well as counter air operations would be required.

After all, just as with every combat operation since Martins, Spads and Fokkers were first employed in the skies of Europe, our ability to dominate Libyan ground, sea and air battlespace was a fundamental part of our strategic plan. This meant we had to render both the Libyan Integrated Air Defence System and the Libyan Air Force operationally irrelevant.

Operating for more than a decade in the Middle East without an air threat, the joint team may take air superiority for granted, but every subsequent campaign objective demanded it—and every airman flying into combat deserved it.

Having now had the great privilege of serving as a Joint Force Air Component Commander (JFACC), I can tell you domination of the enemy's air force was never optional in any plan we produced, and it is impossible for me to imagine a scenario where any soldier, sailor, airman, or marine engaged in combat operations would believe it should be.

This fundamental perspective and our subsequent analysis of objectives were the foundations for our first Course of Action; the one we eventually executed. However, this Course of Action and all it meant in terms of resources and operations also became the source of tremendous debate.

For example, the first tasking we received called for us to establish and maintain a no-fly zone without any kinetic strikes in Libya. That meant we were planning to enforce a no-fly zone where a majority of missions would operate within range of multiple highly capable surface-to-air missile systems. Obviously, we developed this plan as directed, but assessed it as extremely high risk, and offered our original Course of Action as an alternative.

Still, as planning continued, there still appeared to be no public appetite from the Administration for military intervention in Libya. For example, while explaining the challenges associated with intervention, US Secretary of Defense Gates during congressional testimony said, 'Let's call a spade a spade … A no-fly zone begins

with an attack on Libya to destroy the air defenses', emphasising that this would be a 'big operation in a big country'.[2]

These words indicated that, even though military operations were viewed as improbable, the debate regarding potential Courses of Action had already begun to shift towards our perspective that kinetic strikes to take out their Integrated Air Defence System were an imperative.

Concurrent with our efforts to plan for combat operations in Libya, we also developed options to provide humanitarian relief for the tens of thousands of refugees who were fleeing Libya and who had fled Egypt earlier in the spring. On 3 March, the State Department formally requested assistance to support the United States Agency for International Development (USAID) in delivering aid to Tunisia to help with both these humanitarian crises. On 5 March, 86th Air Wing airmen, flying C-130Js from Ramstein, combined with members of the 435th Contingency Response Group to deliver 18 000 pounds of vital aid to the growing camps in Tunisia. Joining our Air Force C-130s were Marine KC-130s, which during the next 11 days returned over 1100 displaced Egyptians to their homeland. These operations were important not only because they helped provide relief for the people of North Africa, but also because they provided a very visible reminder of American resolve and concern.

While humanitarian missions were underway, planning directives for the no-fly zone continued to evolve. Following the public statement from Secretary Gates that strikes in Libya would be required, we received new planning guidance directing development of a Course of Action that would keep all Libyan regime aircraft from flying, using just one initial strike executed with limited defensive counter air and suppression of enemy air defences.

In addition to these efforts, our staff was also working closely with US Africa Command and the Joint Staff to develop other plans for a full spectrum of operations.

Throughout this planning cycle, the situation in Libya continued to deteriorate. It appeared that unless the world acted, nothing would prevent Colonel Gaddafi and his lieutenants from committing mass murder in Benghazi.

Then, on 16 March, just one day before it passed, we received a draft version of United Nations Security Council Resolution 1973. Under this resolution, our potential mission grew in both scope and urgency. Not only did the resolution call for a sustained no-fly zone, it also had a mandate to 'protect civilians'. Tactically speaking, this meant many things over the long term, but once the

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2   Quoted in David Martin, 'Gates: Libyan no-fly zone means attacking Libya', in CBS News – Political Hotsheet, available at http://www.cbsnews.com/8301-503544_162-20038391-503544. html, accessed 20 August 2012.

resolution passed, there was no doubt our immediate concern would be to prevent regime forces from reaching Benghazi. With just hours to develop a concept of operations and plan using whatever resources were most readily available, I began to understand Nelson Mandela's perspective when he said, 'It always seems impossible until it's done'.

Perhaps the most challenging constraints we dealt with in the development of our strategy were related to resources. While we requested forces as early as possible in the planning cycle, we only received a small portion of the validated requirement, mostly after execution began. For example, critical enablers such as AWACS, JSTARS, and additional tankers arrived well after combat operations were initiated. In addition, while full motion video platforms were approved, they were not available until after our hand-off to NATO.

Fortunately for us, we were in US Air Forces in Europe's backyard and since Air Mobility Command's backyard is global, we were in theirs too. As a result, two days before execution, US European Command and US Transportation Command provided support to ensure US Africa Command and US Air Forces Africa had the airmen and equipment necessary for combat operations. While this approach still limited our ability to execute as planned, this loaning of forces did provide the essential capabilities required for success.

During the early morning of 19 March, Operation *Odyssey Dawn* began when Tomahawk Land Attack Missiles (TLAMs) from coalition naval forces were launched against a variety of targets in Libya. As you would expect, the challenges we faced throughout combat operations were enormous and would require our airmen to perform nearly flawlessly in complex, high stress and exceptionally demanding circumstances. And as you would expect from the greatest airmen in the world, they did just that. In the course of 13 days of combat, those airmen would successfully use every one of air power's six distinctive warfighting capabilities. Allow me to give you a few examples.

Because we had no viable basing options in Africa, we chose our base in Aviano, Italy, as one of our primary staging bases. Almost immediately, over 1500 airmen and sailors converged on the base, stretching force support, civil engineering, communications and security forces to incredible lengths. Within days, the base fitness centre was converted into a lodging hall accommodating hundreds of new arrivals, and buildings mothballed and awaiting demolition were furnished and brought to standards necessary to meet operational requirements.

Aviano's food service team expanded operations by 400 per cent, tailoring service to meet the unique dietary requirements of coalition partners and increasing flight meals made from around 28 to over 3200 per day, all from bare base facilities constructed by the civil engineers.

Transportation shuttles began supporting 24/7 requirements and the operations centre and flight line roared to life. A decommissioned runway and parking apron were restored sufficiently to accommodate aircraft parking and a huge influx of cargo and supplies, all within days and without a single augmentee.

This was truly an extraordinary effort by an extraordinary team.

While the base at Aviano was ramping up, US Air Force Air Mobility Command and US Air Forces in Europe were developing creative ways to provide tanker support for *Odyssey Dawn*. To give you an idea of the distances we were dealing with, flying a sortie against targets in Libya would be the equivalent of flying F-16 missions from Sydney to fly close air support over Cairns, supported by multiple air refuellings from tankers launched from Melbourne. Fighter sorties against Libyan targets averaged eight hours and required five air refuellings to generate just one hour on station.

Although we asked for tankers in our initial request for forces, they were not yet approved. As a result, US Air Forces in Europe loaned us additional theatre forces and US Transportation Command stepped up by holding tankers in Europe that were scheduled to transition to the United States and established the tanker bridge critical for logistics support and Global Strike missions.

Under the leadership of the Air National Guard, KC-10 and KC-135 operations from 34 units were consolidated at one location, giving the 313th Air Expeditionary Wing the nickname, the 'Calico Wing'. More than 50 'Calico' crews rapidly coalesced into one incredible team, flying day and night flawlessly supporting *Odyssey Dawn*. This was an operation of thinkers and doers, with each airman displaying great professionalism and flexibility on every sortie. Collectively, these airmen offloaded 17 million pounds of fuel in support of air operations against Libya.

I am sure you've heard the motto, 'nobody kicks ass without tanker gas'; this was definitely true for *Odyssey Dawn*.

Since minimising collateral damage was a primary objective, precision targeting was absolutely critical. To successfully strike just one target from thousands of feet travelling at hundreds of knots in all types of weather—and without unnecessary risk, and without loss of an airman, and while minimising collateral damage, and without appearing to seek regime change, and in accordance with the rules of engagement (ROE), and consistent with the law of armed conflict—is like trying to pull a rope through the eye of a needle. Of course, trying to render an enemy air force irrelevant without striking precisely the right targets in precisely the right sequence is impossible, so fortunately, our Air Operations Center team, coupled with the incredible professionals of the Air Force Targeting Center, pulled a rope through the eye of a needle more than 700 times. In my estimation, our ability to rapidly find, fix and target the enemy was a game-changer during *Odyssey*

Dawn, and is perhaps every bit as distinctive an Air Force capability as the six we currently claim.

To execute initial strikes against Libyan regime aircraft, we tasked three B-2 bombers from Whiteman Air Force Base for Global Strike missions. This permitted us to ensure operational security and to execute combat sorties without concern for potential host nation restrictions, allowing time for the political landscape to gel. Even then, in order to ensure they met time over target requirements, we had to launch all three aircraft without an execution order. Some six hours into the flight and following their first of four air refuellings, the order finally came, and 13 hours after departure our B-2s engaged regime targets in Libya.

This was a complex mission. Besides the great distances involved, it required concurrent and fully integrated operations with F-15E Strike Eagles from RAF Lakenheath, F-16CJs from Spangdahlem Air Base, KC-135s from RAF Mildenhall and the Northeast Tanker Task Force, and EA-18G Growlers from Aviano. But once again, our airmen made the complex look easy. These perfectly executed Global Strike missions helped us establish the conditions required to sustain a no-fly zone and protect the people of Libya from slaughter.

As you would expect, nearly concurrent with these Global Strike missions, our plan called for us to protect Libyan citizens in earnest. In a very real sense, this meant we immediately had to engage the enemy where the threat was greatest, in Benghazi. Because we needed to virtually eliminate the chance of collateral damage, we used dynamic targeting and Strike Coordination and Reconnaissance (SCAR) tactics to search for and destroy enemy forces.

This is a departure from the types of missions we have been flying for the past few decades in the Middle East during Operations *Desert Storm*, *Northern* and *Southern Watch*, *Enduring Freedom*, *Iraqi Freedom* and *New Dawn*. I will admit it is a more challenging mission and one that shifts a greater responsibility from the commander behind the desk to the commander in the aircraft, epitomising our doctrine of centralised command and decentralised execution.

With about 24 hours notice, our first SCAR missions, consisting of a package of Strike Eagles from the 48th Fighter Wing and F-16CJs from the 52nd Fighter Wing, were airborne. While the majority of Libya's Integrated Air Defence System had been disabled at this point, a tactical threat still remained. In fact, as the SCAR package approached Benghazi, an SA-8 tactical surface-to-air missile (SAM) system went active. Of course, as soon as this system went active, so did our F-16CJs and things did not go well for the SAM. In addition, the location of the SAM provided a superb 'mark' in our sniper pods, helping our Strike Eagles locate and slam Gaddafi's elite 32nd Brigade with over 12 000 pounds of munitions. In my view, this was the turning point in our initial efforts to save the people of Benghazi because it stopped Gaddafi's ground forces in their tracks and allowed subsequent targeting of regime forces where collateral damage could be minimised. Once our

initial SCAR package completed its mission, Harriers from the USS *Kearsarge* took over and continued to pound regime forces in the area.

The execution of dynamic targeting required a clear operational picture, uninterrupted communications, and responsive and flexible command and control. These key enablers were provided principally by AWACS and JSTARS, which contributed to the common operating picture that extended from the Air Operations Center (AOC) to our tactical aircraft. Their job was to orient shooters, pair shooters with targets, solve battlespace problems, speed accurate decision making, and bring order to what could easily become chaos. They did precisely that.

For example, towards the end of *Odyssey Dawn*, we received reliable intelligence that regime forces were massing and moving north towards the opposition-held town of Brega. Our AOC Senior Offensive Duty Officer coordinated with JSTARS and confirmed the enemy was preparing for offensive action. As a result, we drafted a 10-line tasking order and passed it to the JSTARS for execution. A two-ship of Strike Eagles patrolling near Brega responded and struck the convoy, destroying between 20 and 25 vehicles, multiple artillery and triple-A (anti-aircraft artillery) pieces, and killing numerous enemy forces. The total time between receipt of the intelligence inside the AOC and completion of the strike was only 22 minutes.

Of course, not everything went as planned. On the night of Monday, 21 March while engaging a surface-to-air missile site, one of our Strike Eagles crashed. With two airmen down behind enemy lines, the next several hours were probably the most stressful of any during *Odyssey Dawn*.

While Vipers, Harriers and additional Strike Eagles circled the crash site, we established radio contact with the pilot and searched for the weapons systems officer. Using techniques learned years before in survival training and continuously updated since, the pilot managed to evade suspected enemy soldiers on foot and in vehicles for more than an hour. At times, they were so close that we heard their dogs and voices in the background of our pilot's transmissions.

While the pilot clung to his freedom, CAP aircraft in the vicinity with support from ISR platforms had to interpret the situation and provide supporting fire, sometimes just a few hundred feet from our airman. And with another downed airman in the area but not yet in contact with the coalition, the need for balance between caution and kinetics was paramount.

Almost immediately after we received word of the crash and confirmed our airman was evading, our Marine TRAP (Tactical Recovery of Aircraft and Personnel) team launched from the *Kearsarge*. Flying at maximum speed into enemy-held territory in their Osprey, they flawlessly located the downed pilot who had managed to make his way to a suitable pick-up point. Executing an absolutely textbook combat

recovery, the TRAP team took the pilot to the *Kearsarge* where he was treated for minor injuries.

As you know, this was not just a joint operation; it was also a coalition operation and one of the most challenging aspects of *Odyssey Dawn* involved coalition integration. Despite the fact that UN Resolution 1973 authorised unilateral action by any country, senior international military representatives began arriving on our doorstep almost immediately.

On the first day of operations, the French and British joined us, making us a loose coalition using three deconflicted but different Air Tasking Orders (ATOs). In the next 96 hours we grew to eight coalition partners, all tasked on a single ATO operating with common ROE, Airspace Coordination Plans, and Special Instructions (SPINS). By day ten, the US Air Force was providing command and control of combat operations involving 12 coalition partners.

The speed with which this coalition grew was extraordinary and presented a major integration challenge, since each partner came with unique employment caveats. However, each partner also came with unique capabilities that made us much stronger than we would have been as individuals.

For example, from a dynamic targeting perspective, the UK, in particular, brought a very unique capability to our coalition—the Dual Mode Seeker Brimstone missile.[3] This missile is designed to be a low collateral damage weapon, using a shaped charge producing little or no fragmentation. For example, in one Brimstone engagement, our RAF partners found a tank parked near an intersection located inside a virtual urban canyon, with multistorey buildings on all sides. The Brimstone allowed our UK pilots to literally thread the needle between buildings and destroy the tank with no collateral damage.

Honestly, I initially had concerns about our ability to quickly and completely integrate all of the coalition members into the air order of battle and maintain a synchronised, coordinated effort, but the coalition performed spectacularly.

On a daily basis, we were launching strike packages consisting of multiple nations, with just the right mix of capabilities for a particular target set, every one of them with spot-on results.

Time and time again, the benefits of common operating procedures, compatible equipment and the common understanding and perspectives of airmen with a history of working together were evident. This is clear evidence of the success and absolute necessity of building partnerships among allies through exchange

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3   Brimstone is an air-to-ground precision attack missile developed by MBDA Missile Systems for the RAF.

programs, inter-fly agreements, exercises and occasionally just sitting down together for a glass of wine or beer.

Overall, the coalition coalesced extremely well. Each partner respected the capabilities others brought to the fight. Each partner understood the need for unity of command. Each partner understood the need for a single Joint Force Air Component Commander. And each partner deferred to the United States Air Force to fill this roll because each partner knew that only the United States Air Force had the capacity to command and control this fight from a cold start like this.

Nonetheless, almost as quickly as it began, our mandate ended, and we initiated transfer of control to NATO. In general, the transfer was adequately accomplished in the time we were given, but our inability to communicate with NATO using classified systems was a major limiting factor.

Handing over operations in the middle of combat is tough enough, but not being able to effectively communicate was crippling. The seamless transfer of the operational command and control was one of the most serious elements for the coalition partners. Although initially there were a myriad of command and control concerns, most notable was the lack of a common US-NATO secure data capability. Simply put, we could not communicate between the two AOCs because our systems are just not compatible. In fact, General Jodice and I had to talk in the clear for several days until our combat communications experts were able to establish a workaround at the NATO command centre.

I must admit, that during this time—during the waning hours of *Odyssey Dawn*—it was impossible to avoid reflecting on what our team had accomplished. Collectively, in just 13 days, we flew well over 2000 sorties, launched more than 200 TLAMs, released thousands of pounds of munitions, saved thousands of Libyan civilians from massacre, eliminated the Libyan Air Force as a threat and met every other objective we were given, all without a single coalition loss. Collectively, this coalition was a success because it was composed of professional airmen from the world's greatest Air Forces.

I obviously do not know what the future holds, but the success of *Odyssey Dawn* may make the merging of air power with indigenous ground forces even more common in the future. This approach may help minimise risk and cost in many cases, but in my view, should never be considered a legitimate substitute for a truly integrated joint force. Instead, the template from *Odyssey Dawn* should inform doctrine and stand ready to serve as a basis for future combat operations where conditions warrant. In the meantime, let there be no doubt that the single most important lesson from *Odyssey Dawn* is that well-trained and professional coalition airmen are the single most important element in a successful air campaign.

Despite near exhaustion, these airmen met the demands and challenges of our mission, whenever and wherever called. And as the US President said when he addressed the nation, 'I want to begin by paying tribute to our men and women in uniform who, once again, have acted with courage, professionalism and patriotism. They have moved with incredible speed and strength.'[4]

In my view, these and many other attributes define the airmen who fought during *Odyssey Dawn*. I honestly do not know if there is a hero among them, but I do know that taken collectively, their efforts were heroic. They saved countless lives, they made America justifiably proud, and in so doing, they changed the course of history.

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4   President Barack Obama, 'Remarks by the President in Address to the Nation on Libya', The White House, 28 March 2011, available at http://www.whitehouse.gov/the-press-office/2011/03/28/remarks-president-address-nation-libya, accessed 20 August 2012.

Canadian Forces: Operation *Mobile* – Libyan Operations

Colonel Derek Joyce

Air Marshal Brown, distinguished visitors and members of the RAAF, when you have the opportunity to command in an operation like this you have to be careful what you wish for. My job, prior to going into theatre, was as the Commanding Officer of the Royal Canadian Air Force (RCAF) Aerospace Warfare Centre, responsible for doctrine and lessons learned. So, literally, I was an 'armchair quarterback'. I was watching this thing go off with my team and we were looking at all the mistakes that were being made and the next thing you know I get a phone call saying, 'By the way you're deploying and you're going to have to go and fix them'. So that was an interesting way to kick off. When I moved in, I was made an AWSE (acting while so employed) Brigadier-General and I will talk a little bit about the command and control structure and how it evolved for the Canadian Operation *Mobile*. When I came back I took the rank down and, yes, in case you are curious, I do sometimes wonder what rank I would have come back at if we had, indeed, lost the war.

First off, let me say that in the RCAF the rank of Colonel is kind of that last rank where you can talk tactics, you can talk operational level and you can talk strategy. So that is what I am going to do today. I am going to mix them all up today and I am going to provide you with a frank review of the RCAF's contribution to Operation *Unified Protector*, which, for us, was called Operation *Mobile*. I am going to talk about our contribution and about the successes, and about some of the lessons we observed. I did not say learned; we are learning some of them right now, and we can go into a little bit of that if you are interested in the question period. But we certainly *observed* a whole lot of lessons. I am then going to talk about command and control, targeting and precision, and our experience with the expeditionary portion of the operation.

We had six CF-18s plus a spare in theatre, two Airbus (CC-150T) refuelling tankers, two CP-140 Aurora ISR maritime patrol aircraft, and we had a couple of tactical CC-130 tankers go in at different periods during the conflict. We had a ship on station in the Mediterranean—normally off Misratah—first off it was HMCS *Charlottetown* and then she was replaced by HMCS *Vancouver*; each, of course, with an embarked helicopter. And then we had members of the RCAF on the NATO AWACS. So, we had about 655 people on any one day, with a total of about 1500 Canadians who actually contributed throughout the entire operation.

We characterise the contribution of the RCAF to the operation much the same as many of the other countries from which you have already heard.

Rapid response is the hallmark of how we reacted. The great story is that, with 24 hours notice to move, we launched our CF-18s out of Bagotville, Quebec, with their Airbus air-to-air refuelling tankers. They did not have a place to land; the diplomatic work was still going on between Canada and Italy as to where they were actually going to be based. So when our fighter detachment commander landed in Prestwick in Scotland—that was the first hop—he called back home to our Expeditionary Force Command and said, 'OK, I'm in Prestwick. Where do you want me to go now?' And the answer was. 'Go to bed because we still haven't sorted it out'. Anyway, we ended up setting up in Trapani, and that is where the fighter operations were set up and within two days they were conducting combat operations. So, with 24 hours notice to move, three days later we were conducting combat operations over Libya. That is the kind of rapid response that we are looking for.

With about two days notice to move, we started moving our headquarters elements into Ramstein; our Air Component Commander moved in with some of his staff. Then by about 25 March, almost a week into it, we started moving our support elements into Trapani and we deployed our CP-140s into Sigonella. And on 6 April we moved our Air Component Commander from Ramstein down to Poggio, into the CAOC. So in about a two-week period, we deployed all of our aircraft, we deployed the beginnings of our support structure and we put our command and control elements into theatre, and then we moved at once. So flexibility was very impressive.

I would now like to talk a little bit about the fighter operations.

The CF-18s flew just under a thousand combat sorties and almost 4000 hours, and about 700 munitions were dropped over Libya. From the flexibility perspective, that aircraft was involved in dynamic targeting, deliberate targeting, dynamic-deliberate targeting, defensive counter air (DCA) and they were also doing the non-traditional ISR role; so a very flexible aircraft and it was used well in a number of broad mission sets. Canada's contribution here was taken as an opportunity to introduce some improvements into our fleet as well. For example, we introduced JDAM (Joint Direct Attack Munition) into our CF-18 fleet in about four months—we did not actually have it in our inventory prior to this; we were using laser-guided bombs. So in June we wrote up the requirement, in July we did the first captive carry test and in August we did the first test at Cold Lake Air Weapons Range in Canada. In September we did the training in theatre and then on 1 October we dropped our first JDAM in theatre. I do not know about your air forces, but that is lightning speed for any kind of procurement that we would normally see in Canada. And we used the Sniper Pod for the first time in operations, very successfully.

Now, a little bit about patrol and reconnaissance missions.

Our maritime patrol aircraft flew about 1400 hours on 181 ISR missions. When you deploy, you always see that gelling at the tactical level of the maintainers and the aircrew, and we had a mission completion rate of 99 per cent; it was absolutely outstanding to see that. The aircraft themselves did coastal ISR and then moved into the overland ISR role. Over the course of the operation, again, we actually built in new capabilities. As an Aurora force, they had never been involved in the naval gunfire support mission and they had never done the SCAR-C (Strike Coordination and Reconnaissance Coordinator) role, or airborne FAC role; so that was actually developed in theatre as well.

Of course, we could not do it without the combat enablers.

Our Airbus tankers did about 250 air-to-air refuelling missions. Over 1000 hours were flown and almost 15 million pounds of fuel offloaded, with a total serviceability rate of 96 per cent; again, an outstanding serviceability rate on operations. The tactical tankers offloaded about four million pounds and were a good niche capability during the operation. From the interoperability perspective, when we deployed our Airbus tankers they had only recently been retrofitted to be air-to-air refuellers and actually had been certified to refuel only the CF-18s, but over the course of a fairly short period of time they were certified to refuel 14 plus new receivers from seven different countries. So, again, it displays excellence in operations, always pushing towards improvement in our operational capability and in operations.

From the expeditionary side, we deployed for the first time an Air Expeditionary Wing. We had in Afghanistan pushed out an expeditionary wing with the helicopters and with the air mobility assets, but this was the first time we had actually deployed the full piece, with all of the support requirements as well. I will talk a little bit about that.

Overall, the Canadian contribution to Operation *Unified Protector* was about 11 per cent of the strike missions and about 6 per cent of the overall sorties and, from the maritime perspective, 15 per cent of the hailings and 3 per cent of the boardings.

I would now like to talk about command and control. It is hard to talk from a Canadian perspective about command and control without first mentioning Lieutenant-General Charles Bouchard, who commanded Operation *Unified Protector* for the duration. For those that know him, he is now nicely embedded in phase one of his retirement.

One of the implications of our command and control structure was that we had four different locations. When I arrived, my headquarters was in Naples. My air coordination element was up in Poggio with about 30 people, including those folks that were actually embedded within the CAOC. Then I had all the flying operations

going on down in Trapani and Sigonella. So, with four different locations, you can imagine the logistics and connectivity issues that arose, and that is not even including the naval ship that was off the coast.

I want to break down discussion on the command and control perspective into two different, distinct pieces. Prior to my arrival in August, the Task Force was actually established into two different task forces. There was Task Force Libeccio whose Commander was the initial Air Component Commander (ACC) up in Poggio. We had four different air detachments set up in Sicily and we had our Task Force Naples Commander set up in Naples, with basically the responsibility to provide support for the entire theatre. Now, having experienced some of the challenges and learned some of the lessons from having that kind of split command and control structure, when I went in we now had under one commander, one Brigadier-General, a single Task Force with an Air Expeditionary Wing stood up in Sicily .

So now I had 'one dog to kick'; I only had one guy that I needed to go to for all air operations, and it worked very, very well that way. Task Force Naples actually stood down and became my J-Staff and what was the Air Component Commander and the initial Task Force Commander became my 'ace'. By doing this, we ended up getting a huge amount of synergies that I will talk about shortly.

Some of the command and control lessons we learned were as follows:

Firstly, from the lessons perspective, we eventually did evolve to adhere to the principle of unity of command. It was absolutely essential that we did that. It took us about four months to do it but the last half of the operation went very smoothly after that.

Now, within Canada, we are in the process of also developing doctrinal joint command and control models and, based on the experience from Operation *Mobile*, it is really important that we advocate now for *air centric* joint models and *maritime centric* joint models for future operations.

During the operation, I had excellent reachback to the Canadian CAOC set up in Winnipeg, and that was absolutely essential. This became very important as we started to expand the mission set for our various aircraft. For example, the Aurora aircraft were initially set up for tasks only over water. But, as the air defence threat changed over time and the operational requirement for more ISR assets also changed, we ended up pushing those air assets over land and into those other roles that I talked about, the SCAR-C role. This was a primarily air centric operation but, as I think about the potential of overlaying a land component onto this, it becomes very apparent that the RCAF needs to advocate for a joint command and control system, which we do not currently have. So, those are a couple of lessons that we have observed and are working on.

I would now like to take a look at some targeting and precision aspects.

From the targeting perspective, it was a great success—very low civilian casualties, as has already been mentioned. Lieutenant-General Bouchard set a very high standard and a very low tolerance for civilian casualties, and we were very successful at that. In the Canadian Task Force we had very clear processes established between the Red Card Holder (RCH), who was up in the CAOC, and the Canadian Chief of the Defence Staff, and we also had a very clear targeting directive—a very successful approach. As I mentioned earlier, the CP-140 Aurora also developed this airborne FAC capability as well. From the precision side, I have already mentioned that we acquired and fielded the JDAM and it was very timely that we did that because the weather in the September-October time frame started to really degrade and the introduction of this weapon system actually allowed us to stay in the kinetic game.

Shortly after I got into theatre, my Red Card Holder came to me and said, 'Sir, I want to go back to Canada and I want to request permission to strike a target that's not within our targeting directive'. I said, 'OK, let's do it'. We ran the process and it did not work. It was not timely and it did not create the effect that we needed. So what we learned from that is that once you get into theatre, once the pressure is relaxed a little bit, you have to take the time to actually exercise the process. There a couple of different reasons for this; firstly, so that everyone along the process understands what their responsibilities are and, secondly but just as importantly, so that each side—both operations and back in Canada—understands what a reasonable expectation is. For example, in the dynamic-deliberate targeting scenario, where some targets were being struck in very short order, it was unreasonable for us to be able to go back to Canada and expect to have that kind of responsiveness. So that was a good lesson from our perspective.

The was also the requirement to be flexible with respect to the targeting structure and this is something that we learned, although a little bit too late. If the operation had continued to go on, I am sure we would have fixed a lot of problems, but when I arrived in theatre all of the targeting responsibilities, both dynamic and deliberate, were left up with the Red Card Holder in Poggio. Now, from the Red Card Holder's perspective, with dynamic targeting it absolutely made sense; that individual needs to be on the CAOC floor, giving the thumbs up/thumbs down, lawyer beside him and, yes, the CF-18s can engage. But from the deliberate targeting perspective, it was different. The reality was that there was better intelligence available in Naples, so I actually had better access to targeting intelligence than my Red Card Holder did up in the CAOC. So one thing that the RCAF is doing is actually looking at those two functions as potentially separate activities—put the right responsibility in the right place with the right individual.

And the last point on targeting is to improve integration and information sharing. We have deployed a lot with coalition allies and what we tend to do is penny-

packet our forces; the CF-18s will go off with the coalition fighters and the Auroras will go off and do the maritime air patrol piece. But as we went into more complex operations and the Auroras became involved in the SCAR-C role, we realised that we have spent so much time in Afghanistan working the air-ground integration piece—which we have become very good at—that we have ignored that air-air integration piece, having aircraft be able to talk to each other. So the CF-18s got a Link 16 but the Aurora has a Link 11, being a traditional maritime aircraft, so they cannot share a common picture. That is something that we need to work on.

From the precision perspective, and it has been raised a couple of times, we went into theatre with 500-pound and 2000-pound bombs. A very small menu for a very large appetite and it became very evident to us that we need to start looking at the ability to hit a broader range of targets with Canadian munitions.

Finally, I am going to talk a little bit about expeditionary support.

By consolidating our theatre command and control structure, it immediately benefited the support piece. My J-staff were suddenly solving problems across the theatre and it worked very well. The creation of our Sicily Air Wing, the Air Expeditionary Wing, on 7 August had a number of knock-on effects. First of all, the communications between each one of the detachments were significantly improved. I pointed out earlier that they were geographically separated detachments, even within the same wing, so it was key that there was one commander in charge of all the flying operations and this significantly worked to improve the communications between the detachments. We also optimised support. We had the support flight set up in Trapani but, again, we had the Auroras set up in Sigonella. That support piece was not really clarified until we were able to holistically coordinate all of our activities underneath the Wing. What it did for us is that it validated our Air Expeditionary Wing concept in Canada, but we need to continue to work it.

Some of the lessons that we learned with regard to expeditionary support were as follows:

We had four different locations and when an air task force stands up it is key that we have already looked at the intelligence architecture required to support that, based on the type of capabilities and the number of locations that are in theatre, and each fleet had its own intelligence requirements. So, integral, close and general support from an intelligence perspective is absolutely something that we have to take a look at. My next point is that the Wing deployment worked. It worked very well, but we need to continue to develop and validate that doctrine. We also need to ask ourselves, at what point does the RCAF need to deploy an air expeditionary wing? What is the 'trigger'? When do we need to send it out the door? Is it for a six-pack of CF-18s? Is it for a 24-pack of CF-18s? Is it for a composite group of aircraft that you work into a complex environment? So that is something that we need to study. I do not have the answers to it, but we need to study that.

My next point is that we went into the operation very light and it was a conscious decision to go in light. As a result, a lot of the support challenges that we faced arose from that. So my recommendation back to the Air Force Commander was that, 'Next time, Sir, we need to go in heavy'. And he said, 'I disagree with you. We need to go in right. We need to go in right, not light, but we need to go in right so that we don't compromise our speed and our flexibility of deployment'. That is a very good point.

My last lesson is that the war will never be as short as you think it is going to be. I arrived there and I figured that after a week I should not have unpacked all the way. But three and a half months later the operation finally came to a conclusion. The point here is that, while I had excellent support from Canada, there was always that tone of, 'Well, should we really send that into theatre, because it is going to be a short operation'. There was always that feeling it was going to be a short operation but really it was not.

I will finish with a little bit of the 'so what?':

Obviously, we proved that the responsiveness and flexibility of air power is key. We were quick to deploy and we achieved a strategic effect, both with the Canadian people and with our coalition allies in the international scene. We were able to do this because we had adequate readiness levels in each one of our fleets. You cannot deploy any kind of air asset with 24 hours notice to move if you are not at an appropriate level of readiness. So from the NORAD perspective and from the NATO perspective, these readiness levels were what ensured that we were able to reply when the call came.

I see this operation as a tactical level success and it is because of our people. As the General said, our people did fantastic work. They were well trained, they were smart and they were responsive, and they really carried the day. But I also see this as a good operational level learning opportunity for the RCAF, certainly and for the Canadian Forces. I cannot say enough about the people because, when it comes right down to it, our Italian hosts were really what enabled us to be able to conduct our operations. All four locations were located in Italy and we had outstanding support from every one of those locations. So, Colonel Di Marco, I owe a debt of gratitude and so does the RCAF for all the support that we had from you and your countrymen, and to Colonel Mauro Gabetta down in Trapani, I owe him a beer—I owe him several beers in fact. But that is the kind of coordination that you get from a coalition that actually makes the operation effective.

UAE Lessons Learned During Operations *Odyssey Dawn* and *Unified Protector*: National Perspective on the Air Campaign

Major General Mohamed bin Sweidan Saeed Al Qamzi

Good morning and thank you for asking me to come and join you here today. I would like to first begin by expressing my sincere appreciation for the opportunity to participate in this conference and panel discussion on modern air power and diplomacy. Like many of you, I have looked forward to listening to our many distinguished guests and appreciate the opportunity to share my viewpoint on the role and application of air power during Operations *Odyssey Dawn* and *Unified Protector*. This morning it is my honour to talk to you about the UAE lessons learned from the Libyan operation and our national perspective on the air campaign, and how we in the United Arab Emirates Air Force and Air Defence (UAE AF&AD) are addressing some of the unique challenges we faced during the operation and the steps we are taking to be better prepared for the future.

On 31 October 2011, a coalition of NATO alliance partners concluded Operation *Unified Protector*. The alliance's job to protect the Libyan people and prevent the further loss of civilian life had been done. At its conclusion, the UAE AF&AD had flown almost 840 sorties in direct support of operations and had committed over 7500 tons of relief supplies. Despite all the success, participation in Operation *Unified Protector* posed many unique challenges and resulted in many lessons learned for the UAE AF&AD, given its limited size and the requirement for the rapid deployment of both aircraft and equipment. In order to do so, the UAE, like many of the participating nations here today, had to rely heavily on many of the same key enablers during the deployment and the execution phases of the campaign that have been previously discussed by other speakers. The combined NATO and non-NATO nature of the operation highlighted some distinct integration and interoperability issues during its execution.

Today, I would like to take some time to highlight some of these challenges from the UAE perspective. I will conclude my briefing with some specific UAE lessons learned and the way ahead for the UAE AF&AD in attempting to address these challenges in order to better integrate and enhance its combat capability with coalition allies and partners in the future.

Launch Decision

For the UAE, the decision to launch its forces was precipitated by the Arab League's 12 March 2011 request to the UN Security Council to establish a no-fly zone over Libya as a means of protecting the civilian population and ensuring the ongoing arms embargo. Operation *Odyssey Dawn*, which would become Operation *Unified Protector*, was eventually mandated on 17 March under Chapter VII of the United Nations Charter and by UN Security Council Resolutions 1970 and 1973, thereby legitimising and supporting the NATO-led mission over Libya. Within a week of the UN decision, the UAE began committing its forces and support to the new operation. As the severity of the humanitarian crisis became clear, the UAE AF&AD committed to providing six of its F-16 Block 60 aircraft, as well as six of its Mirage 2000-9s, to help enforce the no-fly zone over the region and help protect the civilian population from pro-Gaddafi offensive operations. Within 48 hours of receiving launch approval from higher headquarters, the UAE AF&AD had airmen on the ground at Decimomannu Air Base in Italy preparing for the ensuing air campaign. In addition to the fighter aircraft and supporting equipment and personnel, the UAE also made available its entire fleet of C-17, C-130 and CN-235 aircraft in support of the collective international effort to provide emergency relief, personnel, medical equipment and humanitarian supplies.

Training and Preparation

Leading up to the deployment, the UAE AF&AD had been fortunate to have taken part in a number of combined exercises and advanced tactical leadership training events, which simplified a great deal of the preparation and pre-deployment efforts. For the previous two years, the UAE F-16s had had the opportunity to participate and focus their joint coalition warfighting skills during the United States-hosted *Red Flag* exercises at Nellis Air Force Base in Nevada. Exercise *Red Flag* not only provided valuable training and experience in the employment of these forces, but also demonstrated the UAE's unique ability to deploy its forces utilising its newly acquired strategic and tactical airlift assets. Likewise, the UAE's subsequent participation in a Nellis *Green Flag* exercise and an *Antolian Eagle* exercise in Turkey has allowed our fighter units to hone their air-to-ground close air support and dynamic targeting skills while working with airborne forward air controllers and ground joint terminal attack controllers. At the same time, it has allowed our forces to gain better familiarity and proficiency in the role and integration of air power into ground force commanded operations. For the past eight years, the UAE has also been very proud to have hosted many of our regional and allied partners during Advanced Tactical Leadership Courses conducted at the UAE Air Warfare Center at Al Dhafra Air Base. The UAE Air Warfare Center of excellence provides an element of our theatre security cooperation and regional multilateral exercise program. Over the years, this venue has identified many valuable lessons learned in the conduct of coalition operations and provided a forum to define and address

many of the integration and interoperability issues which we will be discussing here today.

Deploying the Force

Unlike many of our previous training and exercise deployments, during the Libyan operation the UAE AF&AD was faced for the first time with a unique deployment issue associated with the rebel build-up of forces supporting the air campaign. In particular, the planning constraints associated with the short-notice deployment of forces forward into another joint operations area made for the challenging yet productive exercise of our passenger manifest and cargo preparation deployment processes. Despite the many challenges, I am proud to say the UAE AF&AD was able to ensure that pilots, aircraft and cargo were ready in time to make our planned deployment time line, and executed the mission safely and with a high degree of skill and professionalism. Certainly, I cannot stand here today and tell you it did not come without a fair share of last-minute scheduling and logistics issues but, because of the hard work and support from many of our coalition partners and a tremendous group of professional UAE airmen, the deployment was by all measures an overwhelming success. However, as with any large-scale operation, despite our best planning efforts certain aspects of the deployment did not necessarily go as smoothly as planned and required some very special attention, especially given the large number of aircraft and large amount of cargo flown simultaneously into the area of responsibility. In particular, acquiring airlift support approval for last-minute diplomatic clearance overflight requests and cargo aircraft landings, airfield on-ground restrictions, and weapons limitations issues all required added time and effort before, during and after deployment to ensure a smart and executable plan could be developed. Similarly, given our small forward footprint and limited quantity of pre-positioned stock available in the theatre, a good amount of reachback, logistical and planning support was ultimately required to address some of our theatre sustainment and resupply issues.

Execution Phase

Just like the pre-deployment and deployment phases of the operation, the execution phase was similarly tested by several limitations pertaining to NATO and non-NATO membership status of the formed coalition alliance, although viable workarounds and solutions to many of these obstacles were eventually realised. A few issues deserve some mention and constructive analysis would be beneficial should similar NATO and non-NATO arrangements be necessary in the future. Specifically, although fighter and squadron operations were able to seamlessly flow into NATO battle rhythm soon after arrival, limited communications access did cause initial problems with the air tasking order, mission planning and post-mission reporting. But, fortunately, this problem was innovatively overcome

through the assistance of some NATO partners at the primary operating location, who were able to supply our deployed operation with the necessary daily and weekly flying directives, as well as assisting with the transmission of post-mission reports. In addition, data link and radio interoperability issues between NATO and non-NATO members left the UAE unable to fully access the airborne link picture and communicate on both primary and alternative net frequencies. As the air and ground campaign continued to evolve, so did the desire to increase close air support and to use precision guided munitions. In order to better match resources with requirements, at the beginning of the air-to-ground phase the UAE relocated its flying operations from the Decimomannu Air Base in Sardinia to Sigonella in Sicily. This movement alleviated the need for cumbersome storage and logistical requirements, greatly simplifying the unit's ability to prepare and execute the daily ATO missions. Despite several challenges identified at the deployed fighter site, the UAE was able to effectively continue its humanitarian support to the Libyan operation and ensure timely and better delivery of food, aid and medical supplies during the execution phase of the relief operation.

UAE AF&AD Firsts

The UAE participation in Operation *Unified Protector* came with many firsts. Most notably, the UAE for the first time was able to demonstrate its ability to rapidly and decisively respond to a humanitarian crisis alongside NATO and non-NATO partner nations, effectively contributing its resources to the full spectrum of diplomatic, military and economic support to achieve the desired coalition objectives. Although there were many firsts, the real takeaway for the UAE AF&AD comes from a better understanding of the logistics, training and equipment challenges associated with participating in a deployed NATO coalition environment. Given the many challenges encountered during *Unified Protector* discussed today, a further advancement in coalition warfare terms and enhanced combat efficiency and effectiveness appears to be only possible through better integration, interoperability and advanced preparedness efforts. This sizeable task is, no doubt, a lot easier said than done. As has been frequently discussed in the aftermath of the Libyan operation, how do you bring together a multinational coalition without the standing agreements and the interoperability practices that NATO has today? The answer to me appears to be intuitive. The required level of operational familiarity and conformity can only be achieved by further expanding existing bilateral and multilateral agreements and partnership efforts, and through a continuation of regional engagement and cooperation activities.

Lessons Learned

Operations *Odyssey Dawn* and *Unified Protector* proved to be the longest NATO air strike campaign in the post–Cold War era, but with fewer support sorties flown. The principally fragmented nature of the enemy effort and the extreme care

taken during the identification and targeting phases justifiably made it necessary to lengthen the air campaign. Just as we have learned many times before, the application of air power alone cannot necessarily single-handedly achieve all the stated strategic and operational goals and objectives of an operation. In the case of Libya, the application of air power simply provided the anti-Gaddafi forces the time, space and operational advantage necessary to win the ground phase and achieve ultimate victory. Interestingly, the Libyan campaign also effectively highlighted that information sharing and the networking of the various capabilities and platforms will prove to be one of the greatest operational challenges in the coming years. New advancements in technology with regard to remotely piloted aircraft, integration of dual-use ISR platforms, new smart weapons and the use of future fifth-generation fighters will lead to an increasingly networked, yet complex battlespace. However, with those inclusions, it will have the added benefit of a much broader and effective range of capabilities. As many of you know, these newly defined requirements and capabilities will not come cheap. Given the current global fiscal environment, future coalitions and alliances will need to rely increasingly on many of the same key enablers which proved so indispensable during the Libyan operation. Partner nations must begin now to focus their efforts on finding an effective and flexible burden-sharing strategy to ensure maximum benefit from limited defence procurement funding sources. These gap-filling measures by allied member states will require an added level of dependence on coalition and partnership building but, at the same time, will provide and maximise efficiency and coalition effectiveness.

The Way Ahead

In addition to addressing the need for increased integration and interoperability, the UAE is at the same time focusing on many of the key enabler issues already discussed here today. Over the coming years, the UAE AF&AD will spend a considerable amount in time and effort on further developing and expanding its command and control architecture. A new state-of-the-art air operations centre will serve as a hub for linking advanced tactical and operational capabilities, with an eye towards leveraging the benefits of future network centric warfare capabilities. The new C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) and remotely piloted aircraft systems will greatly enhance our ability to see the entire battlespace and, in turn, allow us the ability to push quality, decision-making data and information to the right level at the right time. The UAE AF&AD also has made great strides in its close air support and joint surveillance integration capabilities; lessons learned during ground force employment training and exercises. The addition of Sniper targeting pods, Remotely Operated Video Enhanced Receiver (ROVER) terminals, and the procurement of the next generation of precision, stand-off, low collateral damage weapons will ensure that the UAE is well equipped and trained to provide close air support and JTAC (Joint Terminal Attack Controller) support if ever

called upon again in the future. Finally, the UAE AF&AD is to receive the first of three newly acquired Airbus A330 multi-role tanker transport aircraft, which will provide a much needed boost to our air-to-air refuelling and airlift capability during upcoming exercises and training, and provide an added level of operational versatility necessary during our deployed operations.

Conclusion

In summarising the Libyan air campaign, perhaps it has been best stated by the NATO coalition force Air Component Commander, General Jodice, at the conclusion of Operation *Unified Protector* when he said that one of the most valuable lessons learned during the operation was that the alliance was able to act quickly when the need arose, and it worked because people understood the mission and they were able to connect to it. The UAE AF&AD will continue to remain connected and focused on the future mission requirements by continuing to grow, learn and adapt to our ever-changing operational environment through the continuing training of our officer and airmen corps, the modernising of our military hardware and systems, and an increased focus on our various security cooperation and partnership initiatives. The UAE hopes to continue to be a shining example of dedication and commitment towards peace and stability within the region. I would like to conclude my presentation this afternoon by again thanking you for allowing me the opportunity to share some of my thoughts with you. I also would like to offer my special thanks and appreciation again to my US, Italian and fellow coalition partners; without their assistance the UAE contribution would not have been such a success. I look forward to further discussions on the role that air power played and some of the many lessons learned during the Libyan operation.

Lessons Learned from Operation *Unified Protector*: A French Perspective on the Air Campaign over Libya

Lieutenant General Antoine Noguier

Generals, sirs, ladies and gentlemen, good afternoon; thank you for giving me the opportunity to address such a distinguished audience and to give a French perspective on the air campaign over Libya.

By the time Libya started I was working for the French President in his military staff. I switched to my current position as French Air Force air operations commander during the summer of 2011. What I would like to share with you today is a personal view and experience from the high political level down to the tactical air level.

The Libyan case has been important for France from the outset. The French President committed himself very early in the process with a strong determination to act. This had direct consequences for French military forces: we knew that we would be involved and that our basic and primary task was to implement political decisions, to translate words into concrete and decisive actions.

Although primarily an air operation, Libya was for France a joint operation with participation of the three Services. It included:

- more than 4000 people;
- more than 40 aircraft (fighters, AWACS, tankers, transports, MPAs and UAVs);
- more than 20 helicopters, most of them from the Army; and
- more than 25 ships, including the aircraft carrier *Charles de Gaulle* and also a helicopter carrier.

It is worth noting that we deployed all of these assets without stopping other commitments to NATO (Afghanistan, air policing, NRF) and national or bilateral deployments and missions (e.g. Africa, Gulf). The burden for the French Air Force (FAF) was quite heavy. The Libya operation lasted 226 days and nights without interruption. FAF jets entered Libyan airspace on the first day, on 19 March, dropping bombs on armoured vehicles before they reached Benghazi. It was also

a French Mirage which dropped the bomb on the Gaddafi convoy on 20 October, leading to the end of the operation.

I would like to start with the context of this operation, which was very specific. It is important to better understand the French position and commitment to this operation. Then, I will turn to the different phases: national, coalition (*Odyssey Dawn*) and NATO (*Unified Protector*). After, I will highlight some of the main challenges we faced before focusing on two specific issues: our cooperation with Qatar and the involvement of attack helicopters. I will then conclude with some takeaways, from a national perspective, and raise some broader considerations for future air power.

Context

We need to go back to February 2011, to the political situation. After Egypt and Tunisia, the 'Arab Spring' was now moving quickly to Libya. In France, for the public opinion as well as for the political level, including the President himself, it was enough. We could not afford another domino and risk a contamination to the whole Maghreb. We had to do something; we had to stop this spiral of violence. We could not let Gaddafi kill his own people. Sarkozy and Cameron took the lead of the international community and pressed for action, arguing for the right to protect people (R2P). Going against Gaddafi was easy as he fitted very well in his role of the 'bad guy' and he did everything for that. So nobody came to defend or to rescue him.

Another factor which played a role for France was geography. Somehow, history too played a part but we had to avoid a colonialist approach. The Mediterranean Sea is for us our direct neighbourhood (*Mare Nostrum*) as is also North Africa. We have in France a lot of immigration which came from there, including from Tunisia. And the feeling was that we did nothing when events started in Tunisia. So the need to intervene to stop the domino effect (Algeria and Morocco could be next) and to protect Libyan citizens was very much in the head of our politicians and it was also very much supported by the French public opinion.

National Phase

When we knew that from a political standpoint we were determined to act, even alone if needed, we started the building and preparation of forces. It was essentially moving and assembling munitions and preparing aircraft. But we had to wait for the green light, which was the UN Resolution. We needed this resolution with Chapter VII for the legitimacy it gives to the use of force. Meanwhile, around mid-February, as we started to evacuate national citizens from Libya, we also started an ISR campaign from the air (aircraft and satellites) to update our knowledge on Libyan forces and to establish an accurate ODB (offence-defence balance). After a couple of weeks we had a pretty accurate picture of the threat (SAM) and of the

activity of the Libyan Air Force. We assessed the risk as medium and the potential of the enemy air force as very limited.

We also did some planning options, and you will recall that, at that time, there was a lot of debate around a no-fly zone. Why? Because politicians like a no-fly zone as they see it as a defensive posture which gives protection from aerial bombing, which is often considered as the main threat for civilians. We had the same debate recently for Syria. My own experience as a pilot is that a no-fly zone consumes a lot of assets and that it is very difficult to make it fully efficient on a 24-hour basis. Was the no-fly zone the solution to stop the killings? Unfortunately not, and most of the massacres were perpetrated from the ground. As for Iraq some years before, Gaddafi's pilots flew very few missions and never represented a threat. Two of them escaped to Malta with their jets.

During this phase we prepared ourselves on a purely national basis. We had little exchange and coordination at the military level with London and Washington. Our national JFACC (Joint Force Air Component Command) and the C2 chain were activated waiting for the political signal to act.

This came on 17 March with United Nations Security Council Resolution (UNSCR) 1973, with its paragraph 4 mentioning that we could use 'all necessary measures'.[1] For us, it was the green light to use force. But we were still in the build-up of the political phase and President Sarkozy had convened a meeting of the so-called contact group of nations in Paris on 19 March. He was determined to enforce the no-fly zone, to implement UNSCR 1973 without any delay. During the Paris meeting we received the order to take off and launched 16 jets with AWACS and tanker support towards the Libyan airspace.

We activated the no-fly zone at 3 pm. At 5.30 pm, we engaged a convoy of Gaddafi's armoured vehicles which was heading to Benghazi, and we destroyed it. This strike had a strategic effect as it sent a signal to the rebels that we were here, in the air, to protect them. Gaddafi forces got also the signal that we would not let them take Benghazi.

Coalition Operations

Shortly after on the night of 19 March, the US started Tomahawk Land Attack Missile (TLAM) strikes with the UK, and aircraft raids on C2 and SAM sites. At that time these actions were deconflicted between nations but not fully coordinated. Three days later we all moved to Ramstein to build with the US Operation *Odyssey Dawn*. Meanwhile, on the political front there were talks to

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1   United Nations Security Council, S/RES/1973 (2011), *Resolution 1973 (2011)*, 17 March 2011, available at http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/1973(2011), accessed 22 November 2012.

involve Arab countries and to think about the situation after the US would leave. NATO was considered as the logical and natural choice to take over.

In three weeks we had to change the chain of command three times, while pursuing the air activity over Libya. This required a lot of flexibility and capacity to quickly integrate in different structures. And this is one of the main takeaways for us. Thanks to previous training with the USAF at Ramstein, we overcame interoperability problems and transitioned smoothly between three chains of command.

Lastly, we transferred all the aircraft to Lieutenant General Charles Bouchard, who commanded NATO Operation *Unified Protector* from Naples at the operational level, and to General Jodice, the NATO Air Component Commander, in Poggio (Italy). We sent people to both places to augment the officers we had already there under their NATO billets.

CHALLENGES

One of the first challenges was to turn political decision into military strategy. It was not easy and nations had different views and position on the end-state and on the use of air power. It was only after the June summit that a broad consensus emerged on the fact that Gaddafi had to go. The lack of a clear initial political direction hampered the planning of the air campaign.

What centres of gravity should we select? Should we focus on protecting rebel forces in the east or should we go against Gaddafi's regime in Tripoli? How should we apportion air assets, taking into account national caveats (only air defence missions versus all types of missions)? The choice of the centre of gravity and the application of air strategy was not easy and it did evolve throughout the whole campaign.

Operating without people on the ground posed also a lot of difficulties. For years we have been used to operating in Afghanistan where coordination with JTACs is the only modus operandi. Over Libya, we had to coordinate with the opposition forces without having direct and permanent contact. The campaign evolved at the pace they were moving to the west, towards Sirte and Tripoli, and it took them quite a long time as they were not trained and not well equipped.

In this context, targeting was one of the biggest challenges. Why? Because not only did we have to avoid 'blue on blue' (and they all used pick-up vehicles) but we also had to find targets to achieve strategic effects. And we ran out of targets rapidly because we restrained ourselves from destroying infrastructure in Tripoli and other cities. Rule number one was to avoid collateral damage and we did quite well in that regard. We had to positively identify every single target, from the air and very often from the cockpit, which was not easy.

We also had to engage targets in a dynamic way to shorten the OODA Loop. In the end we managed to reduce the loop to a matter of minutes thanks to the use of full motion video provided by ISR platforms, mainly UAVs.

Sustaining operations also was a challenge after four months. Some nations did not get political authorisation to stay longer. Money and ammunitions also became limiting factors for others. Pressure from the media raising the risk of 'mission creep' after two months of operations was also a challenge we had to overcome.

French Specificities

I will now turn to two specificities of the French commitment to this operation. The first one is the cooperation with Qatar. Qatar, unlike the UAE, was not able to run autonomous air operations. They only have a fleet of 12 Mirage 2000 that had never been deployed outside Qatar, which is a very small peninsula as you know. They decided to deploy six Mirages during the Libyan operation but they were only capable of air defence missions and the aircraft were not capable of air refuelling. So we joined them on an air base in Crete and took them under our wing, in mixed formations: a French Mirage with a Qatari Mirage on its wing. Together we enforced the no-fly zone in the eastern part, close to Crete. The Qataris improved quickly during the campaign and they transformed their aircraft and their pilots to perform air-to-ground operations. At the end, they dropped LGBs with 'buddy lasing' from French jets. In six months, they made a tremendous leap in their Air Force capability and learned also to work under NATO procedures.

Another specificity was the use of helicopters to attack Gaddafi forces.

The employment of helicopters was pushed by the French side at the time the campaign was making little progress on the ground and in the air. It was meant to unlock some of the urban issues in cities like Brega in the east and Misratah where aircraft could hardly use their bombs to avoid collateral damage. French Army helicopters were deployed onboard a ship and operated only at night. They flew 40 missions and destroyed a lot of targets, mainly light vehicles.

They were brave but they were also lucky because their mission was quite a risky one. The terrain and conditions were favourable and they limited themselves to coastal operations. They were deconflicted in kill boxes with aircraft in protection above them but their integration into the coalition was clearly in need of improvement.

Lessons Learned

Let me now turn to some of the lessons we have identified.

We were not caught completely by surprise because the President told us that we would go anyway. But we had little time to prepare. We had to be ready on short notice. The Libya operation has been for the French Air Force a real test

of its ability to project from its home bases and to sustain an operation from deployed locations for six months. This was not planned at the beginning and, as I mentioned, we had to do it without stopping other commitments. So Libya was really an excellent opportunity to check where we stand today.

My second point is that Libya helped us to identify our main limitations. It is important because we need to explain clearly to our political masters what we can do but moreover what we cannot do, especially if we have to go alone.

I have already mentioned ISR. I do think it is a real driver, much more than an enabler. No ISR means no targets; this means no effective air power. We were lacking ISR assets, although we used SCAR-C (Strike Coordination and Reconnaissance Coordinator) with maritime patrol aircraft and airborne FACs. And we tried to be dynamic and reactive throughout the campaign. Intelligence was another issue, especially the sharing of intelligence.

Weapons accuracy and efficiency were key since we had to avoid collateral damages. It was a challenge because we lacked low frag munitions. This is one of the main reasons for employing helicopters.

On a national basis, we are lacking some critical assets. I would like to stress that without the US we would not have been able to do this operation. Their strong support on air-to-air refuelling, suppression of enemy air defences (SEAD) and ISR was essential and critical for success.

Sustainment was an issue, especially after five months, and Gaddafi used it to prolong combat. We were lucky on the morning of 20 October, it was a Thursday morning. At that time there were only two pockets of pro-Gaddafi forces: one in the centre and one in Sirte. It was there that a Reaper discovered a convoy of 80 vehicles leaving the city at seven o'clock in the morning. The CAOC in Poggio directed a flight of two Mirages onto this target, identified as pro-Gaddafi forces. One LGB hit part of the convoy after it split in two parts. No-one knew who was inside. We later discovered on TV the outcome, which put an end to this operation.

Conclusions

Was Libya a unique case? Yes, definitely, as were also other air campaigns, in the Gulf and in the Balkans. Libya reminded us that operations can be different to the Afghan model and that air power can have the major role. Air power can be an option of choice for politicians who are always uneasy with troops on the ground and friendly casualties (as we have witnessed in Afghanistan). Versatility, reach, speed, graduation of force, precision and effect are still air power strengths and proved in Libya to be useful.

As for the limitations, we have to be honest.

We will be dependent more and more on ISR platforms, especially if we want to win the battle of time and reducing the OODA Loop, to ensure a minimum of

time between detection of a target and the delivery of ammunition. Permanence is today a real challenge for air power. We know we cannot hold the ground from the air alone. Coordination with people on the ground is therefore essential.

So where does it leave us with the topic of this seminar: 'Air Power and Coercive Diplomacy'? For the Libyan case I would say that we knew from the beginning that Gaddafi was not coercible. We were lucky, because he could have stepped back or made a pause. That would probably have had a strong impact on the coalition. Some nations would have considered that we had reached our objective and that we had to stop the operation.

Undoubtedly, we could not act in Libya without diplomacy. We needed diplomacy for legitimacy. We needed diplomacy to get a strong political coalition. We needed diplomacy to talk with the rebels and coordinate our action with theirs. I will conclude by saying that in Libya we needed both diplomacy and coercion, and less of coercive diplomacy. That was Gaddafi's choice and we know the outcome.

The Italian Air Force in Operations *Odyssey Dawn* and *Unified Protector*: National Perspective and Lessons

Colonel Roberto Di Marco

From 20 March 2011, the date of the start of operations aimed at the realisation of the main objectives set by the UN Security Council Resolutions 1970 and 1973 in establishing a no-fly zone over Libyan skies, protecting civilians and the most populated areas of the North African country, the Italian Air Force actively participated in the 'Coalition of the Willing' within the scope of Operation *Odyssey Dawn*. On 31 March 2011, after the handover of command of military operations to the alliance, the Italian Air Force maintained and reinforced its participation by contributing combat aircraft and seven air bases to the success of NATO's Operation *Unified Protector* in Libya.

The operations conducted in 2011 over the skies of Libya, supported by the staff and aircraft of 16 nations, accounted for the largest Italian Air Force operation after World War II. Since the beginning of the war, the Air Force has quickly fielded all the components and operational capabilities necessary to accurately and flexibly perform assigned missions. In more than seven months of operations, Italian Air Force assets—fighters, tankers and unmanned aircraft—have carried out patrol, air defence, air refuelling, reconnaissance and neutralisation of military targets missions. Overall, Italian Air Force aircraft have carried out over seven per cent of the total missions over the Libyan skies in a context that has confirmed the essential role of strategic air power, both in terms of deterrence and application, to achieve rapid and effective implementation of policy objectives. Italy, and in particular the Air Force as a military force involved at the operational level, has played a basic and visible role, contributing decisively to the projection of NATO aerospace capabilities and their technical and logistical support.

Italian Air Force contributions to the operations, specifically to Operation *Unified Protector*, included relevant behind-the-scene support elements. These elements included operational planners, contributing at all levels of the NATO command and control structure. At the joint operational planning level, Italy hosts the Joint Force Command (JFC) in Naples while concurrently contributing at the tactical level with the Combined Air Operations Centre 5 (CAOC 5) in Poggio Renatico (Ferrara).

AIR ASSETS INVOLVED

Fighter aircraft, such as the F-16, Eurofighter, Tornado and AMX, have been operating as part of Operation *Unified Protector*, deployed from Trapani Air Base under the Birgi Air Task Group, which also included Predator B remotely piloted aircraft, operating from Amendola Air Base (Foggia). Tanker aircraft, such as the KC-130J and KC-767A, also conducted support missions from bases at Pisa and Pratica di Mare respectively, contributing to air refuelling missions. In addition, a G-222VS aircraft was employed for the detection of electromagnetic emissions in the area of operations.

The number and type of Italian aircraft routinely employed—up to 12 on the same day of operations—were calibrated to the missions and military objectives specifically assigned by Allied Command.

THE MISSIONS CARRIED OUT

Over the more than seven months of operations in Libya, Italian Air Force aircraft conducted more than 1900 sorties, totalling more than 7300 hours of flight, for missions such as:

- neutralisation of enemy air defences (SEAD – Suppression of Enemy Air Defences);
- patrol and air defence (DCA – Defensive Counter Air);
- attacks on predetermined ground targets (OCA – Offensive Counter Air);
- armed reconnaissance and attacks on targets of opportunity (SCAR – Strike Coordination and Reconnaissance);
- surveillance and reconnaissance (ISR – Intelligence, Surveillance and Reconnaissance);
- air refuelling (AAR – Air-to-Air Refuelling); and
- detection of electromagnetic emissions (ECM – Electronic Countermeasures / EW – Electronic Warfare).

SEAD is a skill in which the Italian Air Force is among the most capable in the international arena. As such, it was the only other force, together with the Americans, to have employed this capability in Operation *Unified Protector*.

The equipment on board the Tornado ECR (Electronic Combat Reconnaissance) aircraft from Piacenza Air Base's 50th Wing, is capable of detecting and locating dangerous mobile enemy air defence radar systems emissions and, if necessary, neutralising them through the use of air-to-surface AGM-88 HARM (High Speed Anti-Radiation Missile). This activity, which compels opposing forces to take down their radar to avoid being identified and destroyed, is a fundamental practice executed to protect air assets that enter into the area of operations.

F-16 fighter aircraft from the 37th Wing at Trapani Air Base, and Eurofighters from the 4th Wing at Grosseto Air Base and the 36th Wing at Gioia del Colle Air Base,

were engaged, from day one to the termination of the operation, in air defence and patrol missions in support of the established no-fly zones in Libyan skies (DCA – Defensive Counter Air) for the protection of 'friendly' aircraft from air and ground threats, and then to maintain the air superiority necessary to successfully accomplish the assigned mission.

Ground attack missions for the neutralisation of military targets assigned by Allied Command were carried out by Tornado IDS (Interdiction/Strike) fighter aircraft from the 6th Wing at Ghedi Air Base (Brescia), and AMX fighters from the 32nd Wing at Amendola Air Base (Foggia) and 51st Wing at Istrana Air Base (Treviso). The missions were planned and carried out against predetermined military targets (OCA – Offensive Counter Air), or against 'dynamic' targets in areas of likely concentration of enemy assets (SCAR – Strike Coordination and Reconnaissance).

All military objectives assigned to Italian aircraft by NATO were pre-screened by a general officer in the NATO chain of command—the technical term, a 'Red Card Holder'—to verify compliance with the guidelines established by the policy authority.

The instruments of Italian air power employed, in perfect integration with the air forces of the other 15 countries participating, enabled the precise and successful engagement of a very large percentage of military targets assigned, while avoiding any kind of collateral damage to the population. With over 96 per cent accuracy, Italian fighters fired more than 550 GPS and laser-guided precision weapons, including GBU-12, 16, 24, 32, 38 and 48, EGBU-24, and long-range Storm Shadow cruise missiles, used for the first time in real-world operations.

Italian Air Force fighter jets—the Tornado IDS initially, and then also the AMX aircraft and unmanned Predator B—carried out extensive reconnaissance activity and the acquisition of aerial images and valuable data for the conduct of operations (ISR – Intelligence Surveillance and Reconnaissance). In particular, from the more than 1600 reconnaissance targets assigned to Italian aircraft, more than 340 000 high resolution images were obtained through the 'RecceLite' electronic pods employed on Tornado and AMX aircraft. Furthermore, about 250 hours of video was transmitted in real time to ground observers by Predators, the last Air Force asset made available by the Italian Government to NATO. For this operation, the Predator B was employed and controlled, via satellite, directly from the 32nd Wing at Amendola Air Base. In comparison to the Predator A-Plus, the Predator B is larger in size, has higher performance capabilities, can remain on patrol longer, and is able to operate in areas inaccessible to other assets.

For refuelling operations (AAR – Air-to-Air Refuelling), a KC-130J tanker from the 46th Air Brigade at Pisa and a KC-767A from the 14th Wing at Pratica di Mare were employed to support national assets. In addition, the Tornado IDS from the 6th Wing at Ghedi Air Base, also participated in in-flight 'buddy-buddy' refuelling operations in support of similar weapons systems.

Support Provided by the Air Bases Involved

The Italian Government authorised the use of seven bases for the conduct of flight missions: Trapani, Gioia del Colle, Sigonella, Decimomannu, Aviano, Amendola and Pantelleria.

The first five bases were most involved providing technical and logistical support for both Italian and foreign aircraft numbering almost 200 in total, hailing from 11 foreign nations (Canada, Denmark, France, Jordan, the Netherlands, Spain, Sweden, Turkey, United Arab Emirates, USA and United Kingdom). Notably, Trapani-Birgi Air Base hosted 14 per cent of the total coalition sorties including 300 cargo aircraft, processing approximately 2000 tons of material. From the Forward Operating Base (FOB) of Trapani—one of four available to NATO in the European theatre and an essential asset in modern air operations—NATO AWACS (Airborne Warning and Control System) aircraft were employed to ensure effective command and control capabilities. In total, on the Italian Air Force bases involved, 4800 permanently-based and forward-deployed military personnel were engaged on an ongoing basis to provide a range of services and activities, including technical assistance on the ground, refuelling, air traffic control, meteorological services, emergency response, health care and, of course, lodging.

Reinforcement of the
National Air Defence System and Search and Rescue

In parallel with the planned flight missions for Operations *Odyssey Dawn* and *Unified Protector*, the Italian Air Force put in place an enhanced national airspace defence and surveillance system, a core function that the Armed Forces already ensure on a continuous basis through an integrated system of radar and interceptor aircraft. Eurofighters from the 4th Wing at Grosseto Air Base and the 36th Wing at Gioia del Colle Air Base, together with F-16s from the 37th Wing at Trapani Air Base are always on alert. These ready aircraft remain postured for the call from aerial surveillance centres, taking off in a few minutes to intercept 'suspicious' aircraft and counter any threat posed to Italian territory.

With the development of the Libyan crisis, this structure has been enhanced by placing a greater number of aircraft on operational readiness status. In addition, a 'Spada' anti-aircraft battery was deployed to Trapani Air Base. This was one of the batteries supplied by the 2nd Wing at Rivolto (Udine) that provides training and administration for the entire Armed Forces missile component. The 'Spada' is a point-defence missile system employed in specific areas, such as an airport, able to take action against aerial threats at low and very low altitude, thus integrating with the Italian air defence system based on fighter interceptors. Finally, on Trapani, Decimomannu (Cagliari) and Brindisi Air Bases, where they routinely operate HH-3F and AB-212 helicopters for national search and rescue services, the level of operational readiness for the potential search and recovery of flight crews in distress was reinforced.

Panel Discussion

Panelists

- Air Commodore Edward Stringer
- Commander Jol Woodard
- Major General Margaret Woodward
- Colonel Derek Joyce
- Major General Mohamed bin Sweidan Saeed Al Qamzi
- Lieutenant General Antoine Noguier
- Colonel Roberto Di Marco

Flight Lieutenant Kieran Frost (RAAF – Surveillance and Control Training Unit): For the panel, I'm an Air Battle Manager at RAAF Williamtown and I was just wondering, in regard to C2 what kind of TTP [Tactics, Techniques and Procedures] procedures have changed in regards to the dynamic targeting? Have they changed or have they just reinforced the current procedures? And one specific question for Colonel Joyce, regarding the use of what we know as the Orion MPA ISR asset, can you divulge what kind of roles they played as a SCAR platform? It sounded pretty interesting.

Colonel Joyce: The Aurora does not have a self-protection suite, so for the vast majority of the operation it was actually used over water and off the coast of Libya. Over time, it started to evolve into the naval gunfire support role and, with that, we actually took a British commando team onboard—a fire support team—and built up that forward air controller, airborne capability over the course of a couple of weeks and it worked out fairly well in support of the MCC [Maritime Component Commander]. Then we started to shift over to the overland mission as the air threat became more manageable over Libya and the operational need became more required as well, and they started to do the SCAR-C role. We started off again with the British commando, fire support team onboard and then we transitioned over to a Canadian JTAC [Joint Terminal Attack Controller] team that came in from Canada. They had obviously been trained up in Afghanistan and had maintained that capability. So those were the roles for which we ended up using the Aurora. We used the MX-20 camera, that was the key asset, and that was plugged into a laptop that just had FalconView on it and an updated database. It worked out very well; it was a very capable platform. I remember General Jodice one day, after we finally got the capability up and running, was very pleased with the product that was being produced by it. The one thing that the Aurora still lacks is the ability to send that camera picture, the MX-20 picture, beyond line of sight

and that's something that's being worked on right now. It's something that's needed and we recognise that fact, and it's pretty close. I hope that answers your question.

Air Commodore Andrew Dowse (RAAF – Moderator): Would any of the panel wish to discuss the first part of the question in relation to changing C2 or TTP?

Major General Woodward: I'll take that. We found a really interesting dynamic with SCAR as we developed it. With the limited capabilities we had in ISR and certainly no 'boots on the ground', we had to give a lot of authority to the pilot in the cockpit. And I remember in the initial days they were coming back saying, 'You need to clarify this ROE', because they were very uncomfortable with the amount of latitude we were giving the pilots in the cockpit because they hadn't had that in AOR [Area of Responsibility] for very good reasons. But we had to and, thankfully, we had JTF commanders who were comfortable enough to be able to give them that authority because of the circumstances we were operating under. I would say in *Unified Protector* we pretty much continued that. There was a tightening of ROE in the initial days and they had to open that back up again, I think, to be able to keep the success rate. But I would submit that that was particular to this environment and it wouldn't necessarily be the same TTP we would use if we didn't need to. And I think that it's something that every JFACC or CFACC is going to have to take a look at and see what applies to their specific circumstances. I hope that answers your question.

Squadron Leader Chris McInnes: I wonder if the panel could comment on the contribution to the ISR picture made by combat aircraft and the utility and challenges associated with that.

Air Commodore Dowse: That contribution is what we quite often call non-traditional ISR from combat aircraft. Would you like to take this one, Roberto [Di Marco]?

Colonel Di Marco: We identified the ISR contribution as fundamental and also saw the need for persistence of the mission. Italian Predators were sent to the Afghanistan theatre years ago and operated day by day without a very robust framework or training group or a squadron founded on Predators. In the Libyan campaign we found it a very impressive asset. But we are now facing some problems with the manning because it's not a pilot question, it's a sensor operator's question—intel guys and mission monitoring personnel, and all these kinds of specific professionalism that we have to implement and to improve training just to have a robust ISR capability to employ in future operations.

Air Commodore Dowse: Edward [Stringer], have you got something specific to fighter aircraft?

Air Commodore Stringer: It is a caution: beware of snake-oil salesmen! People will look at the highly capable, targeting pods and the wonderful pictures they produce, and you've seen some of them today. But it's no substitute for proper,

persistent ISR by proper, specialised ISR platforms. Ultimately, if you want an ISR system that works, you have to go back to the DPD [Direct Process Disseminate] cycle and get your information management and exploitation sorted first and then plug in your collect platforms afterwards. Don't start off with what looks like a sexy, collect platform and think you've now got an all-singing, all-dancing ISR system, because you haven't.

Air Commodore Dowse: Anyone with anything more to add?

Colonel Joyce: There were two examples during my time in theatre that come to light and one was actually a Canadian national mission, where we had the CF-18 targeting pod being downlinked to Special Forces when we opened up our Embassy in Tripoli. That was one case where we had limited ISR assets available, and I think that's what it comes down to: using the assets you have available at the time to the best effect. In that specific case, it was very effective—the CF-18 targeting pod. Although, is it the best ISR platform? Certainly not, not as far as persistence goes. Later on in the mission, in particular when the Waddan chemical storage facility was of big concern, it took a lot of the very scarce ISR assets for a long period of time and focused them. So there were a couple of other cases I remember, in particular the deeper ISR missions that had to be done by the only aircraft that was capable, which was in fact a fighter using NTISR [non-traditional ISR].

Wing Commander Bill Evans (RAAF – Australian Defence Force Warfare Centre):   I'm interested in the psychological aspects. Coercive diplomacy is essentially a psychological operation in that you're trying to get inside people's minds and one could argue that, once the aircraft are flying and the weapons have been launched, we've probably gone beyond coercive diplomacy. Nevertheless, the psychological aspects are still important. The battle of the narrative was mentioned earlier and I'm just wondering: I presume there must have been some mechanism for centralised management of the message, management of the media. I wonder if the panel could comment on how these aspects were integrated into the campaign.

Air Commodore Stringer: I'll take that. It's not NATO's strong area. If you're trying to get narratives sorted and when you talk about information operations, you can start to stray, doctrinally, into areas that suddenly embrace psyops [psychological operations] and all sorts of things, and people get terribly nervous. And these are not the areas that NATO, as an organisation, had invested in. I think on this operation we were extremely lucky that Gaddafi's regime was not very good at running its own narrative. There were times where we conducted strike operations, especially early on, where the information operations package that had been produced was not then exercised particularly well through the overall NATO system. Luckily, the Gaddafi regime didn't make most of the opportunities and actually the world's press, for some of the reasons I came out with earlier on, actually did our job for us. It is I think one of the lessons for NATO that it

really does have to get its head around this whole strategic communications and information operations question, and it will be difficult because, as I say, it goes into all those areas psyops, narrative, strategic communications. It's all very political. It does hinge on intelligence as well and, therefore, you get into areas of sovereignty trading amongst the nations. So it will need some hard thinking by NATO to get to the bottom of it. What I would say, as a takeaway, is that when you get involved in any of these coalitions that go beyond the alliance is to think it through from first principles in whichever operation you find yourself involved and come up with something that's good enough; it will never be perfect.

Air Commodore Dowse: General Noguier, you did make a point about the evolving strategic context during the air campaign. Do you want to add anything to that?

Lieutenant General Noguier: Well, I would subscribe to what was just said by Edward with regard to the NATO aspect of it and the way to which it falls to NATO to answer this question, especially for the battle of narratives. So I would not add anything more at this stage.

Colonel Di Marco: I'm not quite sure it fixed the psychological part of the operation, but we and the allies also operated in the leaflet segment to inform the population of what was going on during the operation and to give some supportive options to them. Another good point was related to the command and control chain between the military and political authority. We noted that UK, the US and also the French had a very short chain of command between the national governmental authority and the military chiefs. In Italy, we suffer from a kind of bureaucracy and long lag between the military and the political to have timely decisions on the caveat of the ROE, on that critical aspect of the operation. That's a point for us.

Dr Gavin Mount (UNSW@ADFA):   My question relates a little bit to that one and it may be something that you may or may not wish to comment on. We academics observed that there were divisions within NATO, in ISAF [International Security Assistance Force]—a comprehensive approach, for example, and different points of view from different nations. I wonder how you see whether this has galvanised NATO in some way in terms of the understandings of its regional versus global role or its type of military role and so forth. And, for the Arab region, we also hear that this was an opportunity to galvanise the Arab League. What is the takeaway from that diplomatically for us? Do you think this has brought the Arab League together into a more coherent actor in the region?

Major General Al Qamzi: Yes, I think it has brought most of the Arab League together. You cannot have everybody agreeing on something, there is always some difference of opinion. But, finally, they got everything together and they all agreed that what Gaddafi and his forces were doing was wrong and we needed the UN and the nations to act. We are part of that act and that's what happened in the

Libyan conflict. As every speaker today said, this is a unique conflict with Gaddafi, no other one would be similar, whatever the political side of it or the operational side. The next conflict will be totally different.

Air Commodore Dowse: Could we get a comment on NATO?

Lieutenant General Noguier: What I would say for NATO is that the major change for this operation was the US position. As Robert Gates said before he left, with regard to the European nations, this is your take now, it is your time within NATO. So this is the kind of thing where, as European nations, we need to consider to what extent we need to take more responsibility within NATO. We know that Qatar, Jordan and the UAE can work with NATO directly, even including kinetic operations—all that was done during the Libyan operation. So, should NATO decide to operate in any part of the world with those countries, including Sweden as well, it will be easier. At the beginning, and it was explained by UAE, the challenge is to make sure they can be connected and they have the right procedures. So all of that was something which was a very good takeaway from what we had. As far as NATO is concerned, it is very difficult to know what will be next. You heard, as I have heard, that they are not keen to be engaged in Syria, should anyone be engaged. So it will really be case by case. But we can do it without NATO, as well. *Odyssey Dawn* could have done the job. We used NATO because it was easier for some nations to go through NATO, but we could do the same with the same nations without using NATO or using part of NATO.

Major General Al Qamzi: I just want to add that this happened during the Arab Spring itself, so a lot of nations really were trying to act at that time.

Wing Commander Nick Maill (RAAF – Air Force Headquarters):   Major General Woodward and Air Commodore Stringer both referred to a non-combatant evacuation operation [NEO] that preceded the coercive action. It strikes me that any coercive operation will have to be preceded by a NEO of some form, so my question is, was your NEO considered uncertain or permissive and to what extent was the commencement of coercive operations dependent on the successful completion of the NEO?

Major General Woodward: I'll start. We did consider it a permissive NEO. We weren't getting any push back at the time, so in that case it wasn't. If it had been, I think that would have changed a lot of dynamics and could have impacted the way we went into this. Obviously, a NEO is, as you mentioned, always going to precede these and I'll tell you in US Air Force Africa Command we are very competent at NEOs. I think we figured that the last year we planned 12 NEOs on that continent alone.

Air Commodore Stringer: I would say permissive, going semi-permissive and we trod very warily towards the end. Our first plan was for the Foreign Office to hire a civilian aircraft. By the time they had failed to do that, the situation had got less

permissive and, certainly, one of the Hercules took a couple of rounds through the cockpit. So that gives you an idea. I think the second part of your question was did it impact on the diplomacy? Most of that came a bit later but, yes, clearly. I think the important point here is that this is another part of the interplay of policy and operations because we were already racheting up the diplomatic pressure towards the end of the time we were conducting the NEO and I think that definitely made the environment harder for us to operate in because Tripoli International Airport was open as an international airport at the start but, by the end, the UK had certainly positioned itself as hostile to the Gaddafi regime diplomatically and, therefore, we could not just assume that we could fly our aircraft in to conduct the NEO.

Dr Albert Wong (Defence Science and Technology Organisation):   I've learned from the last couple of days that you can only apply coercive diplomacy if you've got the upper hand and we saw today that the NATO forces were indeed a formidable one, particularly compared to the Libyan forces. So my question to the panel is, what happens if your adversary has comparable capabilities? How can the lessons or experience from the Libyan campaign be translated to, say, a scenario in the South Pacific where NATO might not want to get involved? What issues and what lessons can be directly translated and, perhaps more importantly, what is not?

Air Commodore Dowse: A very complex question I think. Part of it is when the strength of the adversary is greater than that we have been talking about today. The second bit is I guess when the coalition is not as integrated as NATO is. Would one of the panel members like to address that?

Air Commodore Stringer: I'll take it on because I started off my presentation by saying that coercive diplomacy is a sort of niche little bracket within doctrine. If you've got to a situation where you've got equal sides etc., then you're back to the linkage between policy and operations, and why are we trying to put a badge of coercive diplomacy on it? You will have policy ends. You will always have diplomacy going on in the background and, as Clausewitz tells us, when we get towards war, it's the continuation of policy with the admixture of other means. So, I don't think there are any particular lessons where I could say that coercive diplomacy would work this way in this environment and definitely work that way in the other. All campaigns are unique. I'm going to be equally blunt on the takeaways, because I'm not a big fan of the idea that you can take one hard and fast lesson—unless it's something very low-grade, tactical and technical—and say it worked there, so it will work here. All you can do is study a range of campaigns as part of your military education and then use your judgement.

Major General Woodward: I would just add that I would think you'd always be concerned about escalation concerns. So that would have obvious significant impacts on strategy and how much coercion you feel you could apply and not put yourself at more significant risk with unintended consequences.

Air Commodore John Meier (RAAF – Defence Intelligence):   I guess there's one other lesson learned that we could take out of this and we'll be doing this again in two, three, five, seven years time. If that's the case, I was wondering if the speakers could put their mind to the other side of the equation. Are there any lessons learned or any weaknesses that you think our next opponent have taken out of our performance? We've only talked about *our* lessons learned. The future opponents out there will be watching exactly what we did in Libya and what we do in the next operation. So, perhaps, there's something there that we should be thinking about that they will be thinking about, about us, if that makes sense.

Major General Woodward: I would say immediately, yes, and I think we've already heard some of it out there. Anti-access strategies are huge and I would say that's probably our adversaries' number one takeaway; the importance of being able to prevent our access, to have a viable anti-access strategy. Obviously, we need to counter that by being able to have the ability to take on any environment.

Air Marshal Ray Funnell (RAAF Retd):   If you would indulge an old military man, I'd like to make a comment rather than ask a question. First, I'd like to say we had a wonderful day yesterday and today has been equally as good, if not better, and really impressive. Also impressive has been the national contributions that were made to the operations in Libya last year and equally impressive, and we've heard it today, is the honesty with which you've faced up to the limitations that were exposed by that campaign. Now I'd like to bring it back here because what we need to do is to expose and examine our own limitations, and then ensure that those limitations are made known to our political masters so that they can bring that into their calculus and know how limited we are in our ability to deploy and employ military power. And I'll finish that by quoting that great American philosopher, Clint Eastwood, 'A man's got to know his limitations'.

Air Commodore Stringer: Can I come back on that? Normally people talk about Babe Ruth when they quote great American philosophers. I think it's a capacity question that comes out. A couple of us have mentioned it and, once again quoting the good General on my left [Lieutenant General Noguier], 'the big lesson was the position of the US' and I think that's what governments are going to have to learn. They [the US] have carried the burden in lots of areas around the world and why should they? This was almost a God-given scenario for Secretary Clinton and Secretary Gates because two other world leaders stepped forward and said, 'Let's go do this', and they were in a perfect position with something that wasn't absolutely strategically vital to the US national interest and said, 'OK, we'll go along with you and after 10 days we'll take the stabilisers off and you're on your own'. So, marvellous lessons were learnt by absolutely everybody. If you're looking at it from the outside and you are considering being in a regional alliance with the US, as you are, it's to be honest about how much capacity you're going to have to provide, rather than the build of the near military, that can look good. I think

we've all pointed out that all our nations have addressed the depth that we have in capacity as well as the breadth we have in capability.

Air Power and the Strategy of Coercion: A Small Air Force Perspective

Dr Sanu Kainikara

Chief of Air Force, Air Marshal Brown, distinguished guests, ladies and gentlemen, a very good afternoon to you. At the outset I must acknowledge that I am acutely aware of the fact that almost all of us are on the verge of suffering from 'conference fatigue', and therefore I will try to keep my comments as succinct as possible and attempt to develop further the points that have been discussed in the last two days from the perspective of a small air force. I will also put forward a number of independent observations that can be superimposed on the overall strategy of a small air force and its application for the employment of air power. This should provide a clear indication of the possible shortfalls that could exist in employing air power as a primary instrument in the implementation of the strategy of coercion, as was done in Libya recently. Further, this paper is deliberately kept purely at the strategic level so that the broader, overarching issues and lessons can be drawn out for detailed investigation. So in the next 35 minutes I will provide an insight into the world of a small air force in the context of implementing the strategy of coercion.

Introduction

In order to understand the strategy of coercion, it is first necessary to have a clear grasp of the spread of strategies and to situate coercion within that spread. Thereafter, the spectrum of the strategy of coercion can be explored which will in turn make it relatively easier to deliberate on the use of air power as a tool of coercion. This paper also lists and explains the major challenges, both strategic as well as operational, which impact on the employment of air power in a coercive role. The primary thrust of this paper is to study the implications of employing air power in pursuing a strategy of coercion for small air forces.

The spread of strategies, in a very broad manner, is indicated in Figure 1. At the lowest end it starts at the strategy of influence and shape, and moves on in terms of increasing intensity to deterrence, coercion, punishment and finally to the strategy of destruction. These terms can be changed, and different terms having similar meanings can be used, but they are indicative of the level of lethality involved when military forces are used to implement them.
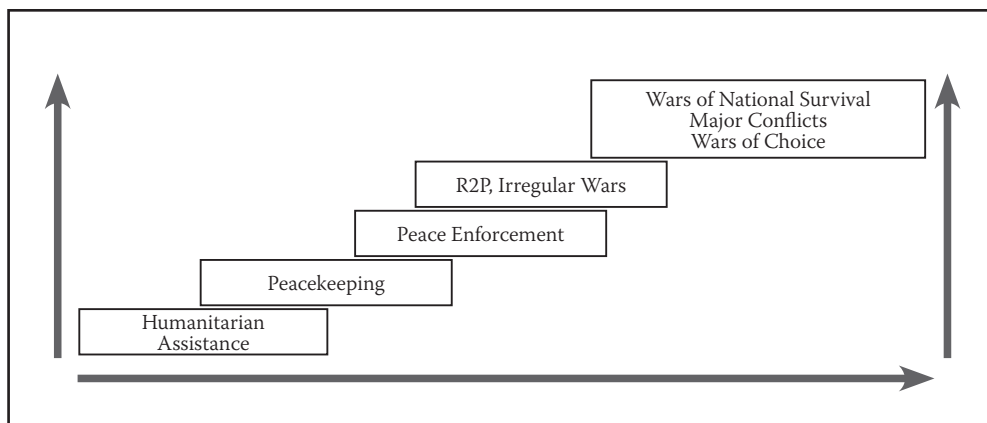
Figure 1: The Spread of Strategies

Each of these strategies in themselves can be further expanded into spectrums of their own to describe the nuances within them. In this instance, the strategy of coercion is elaborated further. Coercion is essentially a part of hard bargaining. When military force is used as a coercive instrument, the implementation of the strategy moves to the higher end of the scale and is obviously beyond the soft part of coercion. In analysing the spectrum of the strategy of coercion, (Figure 2), it is seen that it starts at the highest end of deterrence, or where deterrence ends. The strategy of coercion starts with the application of soft sanctions, progressing to denial through the implementation of extreme sanctions that would involve combat operations as required. Coercion through denial itself has a broad spectrum of activities. The strategy involves initiating punitive action at the furthest end when military force is applied.

A distinction has to be made between implementing the strategy of coercion and understanding the term 'coercive diplomacy'. There is a dichotomy in this situation. Diplomacy by definition is the conduct of negotiations and other relations between states. However, the employment of lethal force as part of coercive diplomacy cannot be considered a diplomatic gesture by any stretch of imagination. On the other hand, lethal force is indeed a part of the spectrum of the strategy of coercion, albeit at the highest end. The strategy of coercion is therefore a much broader and overarching concept with coercive diplomacy situated within it at the lower end of the spectrum. Because of the fact that the application of force is the highest level of coercion, it is also part of the hard bargaining.
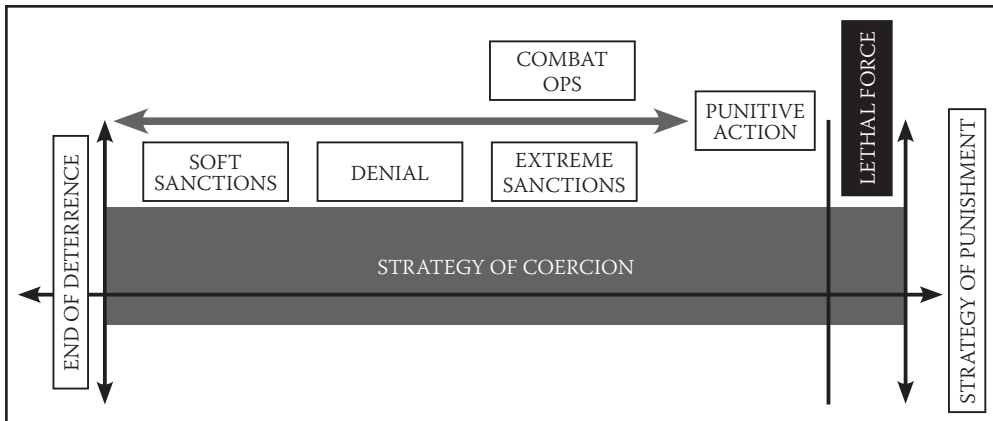
Figure 2: Spectrum of the Strategy of Coercion

Fundamental Points

There are three fundamental points regarding the use of military forces within a strategy of coercion that must be clearly understood. First, coercive diplomacy works best when all initiatives ideally stop short of the use for force. The actual use of force within this strategy is coercion by other means. However, in reality the demarcation between the threat of its use and the actual use of force, that separate the two, is very difficult to discern, especially in ongoing engagements that tend to be extremely dynamic in their conduct. It is a very thin line, making it problematic to distinguish when it has been crossed and, therefore, coercive diplomacy and other acts of coercion are often considered the same. The broader strategy of coercion encompasses coercive diplomacy and the limited use of force, with military intervention being at the highest end of the spectrum while also spanning the lower end of the spectrum of the strategy of punishment.

Second, the application force, whether it is in pursuance of a strategy of coercion or of some other strategy, makes the situation both complex and unpredictable. Since the application of force is a part of the implementation of the strategy of coercion, it essentially creates an area of risk and unintended consequences with the capacity to render random and, at times, uncontrollable effects. Third, the enforcement of soft sanctions and denial is predicated on the use of limited force on an as required basis. The use of limited force to achieve inconsistent effects is anathema to the traditional doctrine of the armed forces of the Western nations. Ever since World War II, Western military forces have operated under a doctrine that provides for capability superiority attained through the mobilisation of adequate forces to create the necessary quantum of power, before initiating a conflict. The Weinberger and Powell doctrines are both examples of the concept

of having a superior force before going to war.[1] Therefore, the application of limited force is a new development within the set doctrines of these forces. Since achieving the desired end-state is the primary objective of all military operations, and imposing a strategy that demands the sparse use of force is contradictory in a purely military context, the situation tends to create tensions in the application of force. However, limited use of force supports the concept of economy of force and suggests a move towards risk mitigation for one's own forces.

The Libyan Model

The United Nation's mandate was given purely for the protection of civilians in the civil war that was gradually intensifying. The adoption of the strategy of coercion, in any given situation, provides the primary advantage of seizing the initiative because the strategy is based on the ability of the coercer to incrementally increase the pressure on the adversary through escalation. This is achievable only if the strategy is implemented, starting with soft sanctions and then moving forward to other options. However, in Libya NATO commenced the intervention at the highest level of the spectrum, thereby forfeiting the inherent flexibility of the strategy of coercion—that of escalation. Any escalation of the use of force would have led to war and obviously to the implementation of the strategy of punishment. This was not the objective, nor was such a situation covered in the UN mandate under the legality of which the operations were being undertaken. In order to be successful in the implementation of a strategy of coercion it has to be commenced at the lowest end of the spectrum, thereby retaining the full flexibility of what is in effect a sophisticated strategy.

In the case of Libya, the NATO forces sacrificed this fundamental attribute of the strategy by employing force at the outset. Therefore, the risk of failure—purely in terms of the implementation of the strategy—was very real and extremely high. This risk was worsened by other constraints at the operational level under which the NATO air forces were forced to function. This is not to suggest that sanctions and other elements within the spectrum of the strategy should have been tried or even that they may have somehow worked, but to emphasise the point that the strategy of coercion is dependent on the ability to escalate in order to succeed. Further, it is unclear at this time whether or not NATO would have escalated the application of force into the regime of the strategy of punishment and also whether the UN mandate, as it stood at that time, would have legitimised such an action.

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1   The 'Weinberger doctrine' was first disclosed by the then US Secretary of Defense, Caspar Weinberger, in 1984 in a speech to the National Press Club in Washington, DC. It contained a list of six conditions to be met before the United States would commit combat forces abroad. The 'Powell doctrine' is a media-created term, named after General Colin Powell in the run-up to the 1990–91 Gulf war. Based largely on the Weinberger doctrine, the Powell doctrine holds that the US should go to war only as a last resort and then only with overwhelming force.

The basic factor that forced the use of force at the initiation of the intervention itself was the urgent need to stop the dictator, Muammar Gaddafi, from killing his own people, even though by doing so the strategy of coercion was almost immediately played out.

The need or the decision to apply force at the start of the intervention is not being debated or analysed here. However, the fact remains that doing so in pursuing a strategy of coercion carries with it a high risk of failure because further escalation of coercion, a primary requirement for its effectiveness, is not possible. The inherent high risk of failure in adopting this model will detract from it being considered a viable option and therefore planners of future military interventions are unlikely to commend the strategy of coercion as a whole in such circumstances.

Air Power and Coercion

Coercion through military intervention is not a new concept. What has changed in the past decade is that the physical presence of foreign troops in an area of unrest tends to exacerbate the opposition to such intervention, pushing it incontrovertibly into the realm of irregular wars and normally increasing the tempo and intensity of the conflict. Such interventions also tend to bring about international scrutiny that could at times lead to condemnation. In other words, the traditional 'boots-on-the-ground' approach has become politically unacceptable. The solution that is being employed is to use air power, which somewhat mitigates the pitfalls of the physical presence of troops. However, the employment of air power in a coercive role is also not a new concept—it has been used to coerce recalcitrant adversaries to toe the line from the earliest days of military aviation. The employment of the Royal Air Force in the Middle East in the 1920s in the 'air control' role is a classic example of the use and success of air power in a coercive role.

The model of the employment of air power in pursuing the strategy of coercion has evolved over the years and in the current circumstances it has become the first choice option for nations committing to military intervention, irrespective of the circumstances. There are very distinct advantages that accrue with such employment. However, there are also some strategic as well as operational challenges to be overcome if success is to be assured in the use of air power in this slightly nuanced role as an instrument of coercion.

Air Power Advantages

There are three distinct factors that make it advantageous to employ air power as the first choice option in most circumstances. First, it carries comparatively low operational risk vis-à-vis own casualties. Second, since operational risk is low it is relatively easier to obtain political support for initiating action and third, since it does not normally involve basing troops in the area/country of unrest, minimal diplomatic challenges are posed. These factors influence decisions above the level of the military which are taken at the highest level of government. The success or

otherwise of the application of force in a coercive mode is always dependent on the government's ability to make complex but correct decisions.

The other advantage of air power is its scalability. Scalability is the ability to ramp up or down the intensity as well as tempo of operations at will to suit emerging situations in a contextual manner. This is an inherent strength of air power and translates directly to seizing and thereafter retaining the initiative in any operation or campaign. Further, the ability to deploy at short notice and respond rapidly to unforeseen developments is an added advantage that air power brings to military interventions.

Strategic Challenges

There are four basic strategic challenges to the use of air power within a strategy of coercion. At the lower and middle part of the spectrum of the strategy of coercion (Figure 2) the attempt is to enforce sanctions—soft initially and then through denial to extreme ones. These sanctions will be effective only if they can bring on severe economic disruption, which in turn requires that they be enforced for a sufficiently long period. In the case of autocratic regimes against which these sanctions are imposed it becomes even more difficult to employ coercion in this manner because there is almost always a 'disconnect' between the apex of the regime and the common people. The years-long sanctions and the enforcement of the no-fly zones in Iraq after the 1991 Gulf War, which did not stop Saddam Hussein from continuing to rule the nation in his own fashion, are demonstrative examples of this disconnect negating the effects of extreme sanctions as a coercive action. There are two challenges to achieving success in this kind of a situation. First, there must be the political will to continue enforcing the sanctions for as long as necessary—with the duration to be counted in years rather than even months— provided the circumstances on the ground provide the intervening nation(s) with this luxury of time. Second, achieving sufficiently robust effectiveness of the sanctions with limited force will require adroit application of essentially non-kinetic capabilities of air power. When these factors are combined and analysed it is not difficult to visualise that coercion, through sanctions—both soft and hard— and denial, has only a very slim chance of success from a strategic perspective.

The second challenge is equally important to understand and solve. Coercion is primarily aimed at the cognitive domain—both the belief system and the behaviour pattern. Control and manipulation of the cognitive domain of another person or group of people is difficult and complex. The first requirement in attempting to influence the cognitive domain is to ensure that actions that are initiated to create predetermined effects must both be aligned to, and have a direct connection to the desired end-state. This needs careful consideration of the impact that coercion will have on the nation/entity being coerced. There are two challenges that emerge when attempting to coerce and influence the cognitive domain of an adversary. First is that an air campaign normally generates a perception of impermanence

as compared to an intervention by troops on the ground. Therefore, its coercive power, especially when in the non-kinetic phase of its application, is considerably less. However, it can be considered a clear demonstration of political will to be involved in the issue and of the intervening nation's ability to escalate the actions if necessary. Second, influencing the cognitive domain with the selective and limited use of force is much more difficult than if unconstrained use of force is possible. In pursuing the strategy of coercion, primarily dependent on influencing the cognitive domain, this could at times become an insurmountable challenge. It is appropriate to state here that this challenge can never be fully mitigated.

The third challenge is to manage the international perception regarding the interpretation of United Nation's Resolutions primarily by the Western nations. There is a damaging perception prevalent, especially in the developing world after the Libyan intervention, that Western nations tend to interpret UN Resolutions unilaterally to suit their own agendas and serve their security needs. This has been reinforced because the manner in which coercive intervention is actually conducted normally has the potential for unintended, or at times intended, mission creep to set in as demonstrated in Bosnia in 1995, Kosovo in 1999, Iraq in 2003 and Libya in 2011. In Libya particularly, a clear mandate to operate within the concept of the responsibility to protect very rapidly shifted to regime change as the desired end-state, something that was not even debated at the United Nations. However, if the operations in Libya are analysed it becomes apparent that the objective to protect the civilians from danger could not have been achieved without a regime change, given the stated objectives of Muammar Gaddafi. The challenge, therefore, is to limit the political objectives when employing coercion to ones that can be achieved without mission creep and secondly, if the objectives require a change in the mandate, to be able to get the necessary legal and moral authority to do so. Air power does avoid mission creep at the operational level, but when the creep takes place at the strategic level air operations will also be drawn into it.

The fourth challenge is to match the ends, ways and means. Aligning the ends and means and developing a strategy to achieve the desired end-state within the available means and resources is difficult at the best of times when means are adequate and easily available. When there is a situation where the ends are ambiguous and/or changing dynamically and the available means are restricted, the process of alignment might become impossible unless either the desired end-state or available resources are altered appropriately. Matching ends, ways and means in uncertain circumstances that would normally prevail in the application of the strategy of coercion is a challenge. It could be ameliorated to a certain extent by methodically matching the ends, ways and means within the full spectrum of the strategy and, initiating corrective action as soon as a discrepancy is noticed.

Operational Challenges

There are a number of operational challenges that could detract from the strategy of coercion being effective. However, in order to keep the focus of this paper at the strategic level, only three major operational challenges are being discussed, and that too in a brief manner. The first challenge is that there is an expectation that in implementing a strategy of coercion there will be no casualties, even if force is used at the higher end of the spectrum of the strategy. At times this expectation transcends even the requirements of International Law governing the application of force. Two sub-challenges that, when combined, form the expectation of 'no casualties' emerge from this situation. The first is to gain acceptance within the general public and other monitoring bodies of the fact that 'zero risk' attacks or strikes are not possible; in other words, there can be no such thing as a 'clean war' with no casualties when lethal force is being applied. Application of military force has the potential to create unintended consequences although professional conduct of operations greatly reduces the probability of error to acceptable levels. The challenge is to deliver politically desired results with minimal casualties—within one's own forces as well as the adversary's—and to avoid collateral damage.

The second sub-challenge is to manage government expectations and public opinion regarding unintended, and unfortunate, collateral damage. Dependent on the seriousness of the damage, it is possible for public opinion itself to become a centre of gravity that could influence the further progress of the campaign. Since the strategy of coercion is below the level of full military operations, collateral damage becomes even more unacceptable. Therefore, perception management becomes a challenge but is of fundamental importance and should be done by preparing the government and the larger public to the possibility of collateral damage even before operations are initiated.

The second major challenge is the need to maintain the required tempo of operations. The effectiveness of coercion is directly influenced by the ability of the force to maintain the necessary tempo of operations. Any loss of tempo will dilute the air power effectiveness in a coercive role. In the case of Libya, the NATO air forces had to reduce the tempo of operations after the first three weeks because sufficient numbers of precision-guided munitions (PGM) were not available. Considering the need to avoid even minimal collateral damage, it was impossible to continue operations at a level required to maintain the necessary tempo when the forces ran out of PGM. The direct lesson that can be derived is that deliberate resource planning that also caters for possible contingencies is as important as having the right concept of operations. It is only an optimum combination of the two that can assure success. The other factor that affects the tempo of operations is that military forces implementing a strategy of coercion are more prone to be operating under more restrictive rules of engagement than when other strategies like punishment or destruction are being employed. This could translate to slow progress that, in turn, will require considerable political will to stay the course until

the desired end-state is achieved. The challenge will be to maintain the desired tempo of operations and ensure that the political will does not flag at any time. If this is not achievable, the efficacy of air power itself in pursuing a strategy of coercion might start to get questioned.

The third major operational challenge emanates from air power's ability to respond rapidly to evolving threats. Rapid response from air power assets can contain a fast-deteriorating surface environment. A very effective and speedy decision-making process across both strategic and operational levels of conflict is necessary to ensure the efficacy of such responses. Further, this requires a high level of coordination between land and air forces to avoid fratricide, which is of particular importance when air power is being employed in a coercive manner. In fact, speedy decision-making and coordination are critical requirements to the success of coercive use of air power. When air power is already committed to operations, especially in a muted manner like coercive activities, it is possible to have a situation wherein adequate resources may not be available to respond to immediate requirements. The challenge is to ensure that there is sufficient residual capability available to cater for emerging threats and rapid response requirements. At the planning stage itself, the minimum size of the force necessary to maintain this flexibility through the duration of the operations must be estimated and ensured.

Implications for Small Air Forces

The Libyan campaign, where the exclusive use of air power in a coercive role brought about the collapse of the Gaddafi regime, highlighted a number of advantages as well as challenges to achieving success through the implementation of a strategy of coercion. However, it is difficult to clearly identify lessons that can be studied and further, the lessons that have been identified must be analysed with the understanding that they may not stand the test of time since the campaign being analysed is only six months old. Essentially, a number of factors will not be available to the analyst so close to the completion of the campaign for a number of reasons that include operational security and the secret nature of some of the deliberations conducted prior to and during the conflict at the strategic level of decision-making. Therefore, the implications for small air forces being listed and explained in this paper will have to be considered an unrefined version of what would subsequently come out with clarity. There are seven implications of import that can be identified:

- the increased role of air power in national security;
- the balance of ends, ways and means;
- professionalism of the force;
- force generation capabilities;

- flexibility of the force structure;

- possessing critical mass; and

- issues of coalition operations.

Air Power and National Security

Over the past few decades the role of air power has continually increased in the security strategies of most nations. This is primarily because the security strategies have become more reliant on military power projection capabilities and air power is critical to military capabilities. This is not an artefact of history, but a clear and undeniable fact. The implication is that a conscious decision has to be made at the national level to invest sufficiently in building and maintaining the required level of air power capabilities. This is of fundamental importance to small air forces that operate within a limited resource allocation. The reason is that air power can create significant strategic effects with minimal effort and even through concerted tactical actions. It is also of importance that air power can create the necessary strategic effects with the least risk to one's own forces. This ability makes air power by itself an element of national power that can only be marginalised at considerable risk to the overall security posture of the nation.

Balancing Ends, Ways and Means

National ambition, which could be equated to the desired ends, must be matched with robust security strategies, the ways that are in turn aligned with the means available, the military capabilities. The starting point in this calculation is the desired end-state that must be clearly defined and articulated prior to the commencement of any campaign. This is necessary for the ways and means to be balanced to ensure success. The implication for small air forces is that since they do not have the excess capability necessary to conduct an open-ended conflict—where the end-state is unclear—they need a clearly defined end-state in order to optimise their operations and increase the assurance of success. Dynamic end-states that change through the conduct of operations, which are imposed on a force, will always tend to stretch the capabilities of a small air force. The first indication of the force being stretched beyond its flexible capacity will be the gradual decline in niche capabilities that will become dysfunctional. This is a situation that must be avoided at any cost since the niche capabilities are critical to the overall performance of the air force.

The other element that contributes to balancing the ends, ways and means equation is the adaptability of the force. In this context, adaptability is centred on responsive and contingency planning that can be superimposed on deliberate plans that have already been made. From an analysis of the Libyan campaign, it is very obvious that the country was not on the strategic horizon of any of the NATO nations and only marginally in the United States security fabric. However, the rapid response to the United Nations Resolution is a silent testimony to the adaptability of the air forces

involved that were able to commence effective operations while parallel planning was being conducted. The implication for small air forces is that the ability to adapt in a responsive manner to changing circumstances and contexts, both in planning and execution, enhances air power efficacy and is the key to success. A force that is not prepared and is unable to adapt at the pace required will not be able to achieve the desired objectives.

Professionalism of the Force

The Libyan campaign demonstrated the ability of air power to innovate and improvise during operations through the professionalism of the forces involved. Basically all air forces today are under immense pressure to deliver compelling air power with fewer assets than before and within increased financial constraints. The professional competence and maturity of the force will be an important factor in meeting these requirements that tend to be inimical to delivering air power of the desired calibre. The measure of an air force's effectiveness is its ability to control the air and create the desired effects persistently through an optimum combination of air attack, air mobility and airborne intelligence. Combining the various elements of air power and optimising its characteristics to achieve the desired level of competency in its application is a function of the professional mastery of the force as a whole. Further, the increasing sophistication of air power assets, both to operate and to maintain, makes professionalism a foundational requirement for the efficacy of an air force. Small air forces operating without the luxury of large number of personnel place extraordinary reliance on the professionalism of its limited numbers to be efficient.

Force Generation Capabilities

One of the primary reasons why air power is almost always the first choice option for the application of power, especially within a strategy of coercion, is its ability to rapidly ramp up or down the tempo and intensity of operations at will. This scalability, increasing or decreasing the application of force is critical to the success of a coercive strategy and is dependent on the force possessing the full suite of air power capabilities. The implication is that small air forces will need to carefully nurture full-spectrum capabilities if they are to provide sufficient scalability in implementing a strategy of coercion. Readiness and posture are the other two elements that directly affect force generation and are critical to conducting no-warning campaigns, like the Libyan campaign. However, maintaining high readiness status indefinitely will bring on long-term fatigue in the combat elements in the case of small air forces. Readiness and posture have to be carefully managed with a clear understanding of the prevalent geopolitical and security environment. Small air forces must be cognisant of the fact that it would take twice as long to ameliorate the effects of long-term fatigue as it would take for the fatigue to set in. Both these factors—scalability and readiness state—require full-spectrum capabilities in a minimum determined quantum for a small air force to be sustainable in operations. The efficacy of a small air force that has the necessary

full-spectrum capabilities will thereafter be a function of the balance between specialisation and generalisation of both personnel and systems. This balance has to be monitored and adjusted at regular intervals to ensure that it is maintained at the required level.

Flexible Force Structure

An ongoing conflict, irrespective of its duration, must never be used as the yardstick to dictate any major force structure changes because all such inputs will be biased towards the current conflict. An established mature force will only initiate evolutionary changes to its force structure while retaining sufficient flexibility within the structure to cater for minor aberrations in the process of conducting operations. The evolutionary process itself will be based on deep-rooted analysis of a large number of conflicts in which it has been involved, examination of emerging trends in the conduct and characteristics of war, as well as improvements in military capabilities. The solution to countering rapid changes to warfighting techniques is to have a force structure that is sufficiently robust but retains the necessary flexibility to adapt to emerging circumstances rapidly. For a small air force, once again, there is a need to balance the robustness or rigidity of force structure with flexibility or suppleness so that its limited resources and capabilities are able to cater for changes in the conduct of war while simultaneously being able to retain the necessary scalability. It is easy to forgo one requirement while trying to provide the necessary balance for another. Sufficient flexibility is an important factor in the employment of air power in a coercive role.

Critical Mass

Small air forces are dependent on a minimum critical mass for their effectiveness. If the total mass falls below a critical level the air force in question will commence an initially gradual and subsequently rapid downward spiral of ineffectiveness leading to its independent status itself being questioned. The calculation of the critical mass depends on three major factors—the national security posture and threat perception; the status of the air force within the security policy and strategy; and the relationship between capability and capacity in the air force. Minimum numbers will always be required to create the initial impact and thereafter to retain the capacity to meet pre-calculated and emerging requirements. Critical mass required for a particular campaign will be determined by the area that the air force has to cover. Alternatively, the critical mass of a force will determine the area that it can cover effectively. For example, Libya was 160 times the area of Kosovo and therefore the critical mass required to cover Libya was far greater than in the case of Kosovo.

The other factor that impacts critical mass is resource constraints, which are being faced by all air forces. Resource constraints have to be considered a fact of life and cannot be wished away. The solution is to optimise the methods and techniques being used to employ the limited assets that are available to ensure that

the necessary capabilities are available when required. In other words, resource constraints must not be permitted to compel an air force into a position where it is operating below critical mass. Retaining high-end capability while reducing overall capacity as a method of resource conservation will impact directly on the full spectrum capability of an air force and indirectly the scalability, which is critical to implement a strategy of coercion. Arguments to reduce even few of the systems in an air force in order to fund other acquisitions that would take an air force below the critical mass are ill informed and made without an understanding of the enmeshed relationship between capability and capacity.

Air forces provide a nation with air defence of its territory and its interests and ensure the sovereignty of the nation's skies at all times, 24 hours a day and 365 days a year, which is something that has no visibility in the public perception. In other words, air forces are always conducting some kind of operations even when the nation is in a state of complete peace. Therefore, when an air force responds to an emerging crisis or threat, it is conducting a concurrent campaign, in addition to its core role of air defence of the nation that is ongoing. While calculating the acceptable level of critical mass, this concurrency requirement must be factored in, especially in small air forces.

Issues of Coalition Operations
Nations commonly referred to as middle powers will invariably have small air forces that will almost always be junior partners in coalition operations. These middle powers will find it necessary to align themselves with the political objectives of the larger powers who will be the coalition leaders by finding common ground and shared political goals. Further, they will also be more prone to being influenced by domestic political issues and other diplomatic forces. From a purely air power perspective, the command and control arrangements will need constant adjustment to ensure that unity of command is maintained within the coalition while the sovereignty of the nation and its independent air force command is protected at all times. This will need careful and nuanced understanding of the coalition command and control arrangements as well as the national rules of engagement.

In the prevailing global security environment the ability to operate effectively within coalitions is critical for the development and efficacy of small air forces. This ability can be optimised through strengthening alliances and increasing cooperation with potential partners. It is also necessary for small air forces to be able to lead regional coalitions, if necessary, and the experience of operating in larger coalitions will be a stepping stone to achieving efficiency in assuming the lead in smaller coalitions.

Summing Up

To sum up the implications for small air forces in implementing a strategy of coercion I would like to put forward three points. First, the effectiveness of the strategy of coercion is dependent on far too many variables for it to be implemented with any assurance of success. Coercion can be successful only when it is implemented to achieve very clear political goals and functions within an effective broader strategy that has inherent flexibility to move on to a higher or lower strategy within the spread (refer Figure 1). The actions being initiated must be prompt, effective and, most importantly, be seen to be legitimate and credible. Small air forces should therefore nurture full spectrum capabilities to provide the rapid response that will be demanded of them.

Second, intervention, through applying any of the strategies in the spread, to achieve political objectives needs very strong national strategic confidence based on tangible military capabilities to succeed. Historically the most successful interventions are seen to be those that clearly aligned the desired and articulated end-state with clear strategic logic and direct resource allocation. There is no substitute for deliberate planning that is capable of flexibly addressing emerging contexts at the operational level of the intervention. The political will and availability of resources must be assured, especially in the complex process of implementing a strategy of coercion.

Third, in the Libyan campaign the use of air power, within a very broad definition of the strategy of coercion, created an outcome of great political significance for the long term. However, the campaign also brought out two questions regarding air power. Will the success in Libya tempt governments to place increased reliance on air power as a coercive instrument? The answer would lean more towards the affirmative because of the political inclination to avoid risking one's own forces as well as to manage international perception regarding foreign troops being stationed in another country. The next question is, will this model of intervention become an established trend into the future? The answer would be that this is highly unlikely. The Libyan campaign does not provide a broadly applicable blueprint for the future employment of air power as a coercive instrument, nor as a tool for the implementation of any of the strategies in the spread. In fact, none of the previous air interventions, from Bosnia in 1995 to Iraq in 2003, can be considered even as adaptable models. The primary lesson to be drawn is that each and every employment of air power as an instrument to implement the strategy of coercion within a campaign will be unique. It cannot be done based on a preconceived template that may have been successful in a previous case. Small air forces will have to be cognisant of this fact.

End Thought

There is a dichotomy in the employment of air power, by either a large or a small air force, or for that matter military force, to implement a strategy of coercion. In today's world pursuing an interventionist strategy of coercion for humanitarian reasons carries a very high risk of failure. This sort of failure is unaffordable for most nations and in most cases not a viable option in terms of national security. Conventional wisdom states that a nation must risk military failure in a conflict only when there is no option but to enter into the conflict. Otherwise commitment to a conflict must only be done with sufficient capability to achieve assured victory. Therefore, it is apparent that when the national interest being protected or furthered is not critical to the fundamental wellbeing of a nation, the attempts being made can be half-hearted, as in the case of military interventions implementing the strategy of coercion.

The question for every democratic nation is whether or not coercive intervention with the inherent risk of failure is worth the tangible risk that the failure brings to the long-term security and wellbeing of the nation? I believe that the jury is still out.

Conference Summary

Air Vice-Marshal Leo Davies

Good afternoon, distinguished guests, ladies and gentlemen. The purpose of this very short brief is to provide a summation of the conference proceedings, although it is not for me to tell you what you have learned from the conference—that is certainly not my aim. There was plenty of fruit out there for you to make those determinations for yourself. I will do my best to keep this relatively short.

Yesterday morning, Air Marshal Brown challenged you to question the underlying principles of air power against the realities of recent operations. This challenge, I suggest, quite neatly set the framework for the themes that we have explored over the last two days; some of those big themes, themes of consequence and themes of relevance. Themes that do, in themselves, challenge us to think clearly and coherently about air power, about military force and about political purposes for which they are put. Air power and coercive diplomacy, as our speakers have reminded us, contain terms, ideas and concepts that might not naturally appear as comfortable bedfellows. The notion of military force to coerce is quite reasonably a sensible, if contested, notion. The idea of coercive diplomacy, however, is a less obvious rational or logical combination. But as we have, heard coercive diplomacy must be a stepped approach, scaled, proportional and discriminatory. Effective coercive diplomacy requires a threat, which the targeted actor must perceive as credible. There must be no doubt that we are prepared to carry through on that threat. Yes, we have been reminded again that force, diplomacy and coercion have indeed crossed the span of time, interacted and shaped each other in a complicated fashion. This fact was borne out in the discussions yesterday. Most importantly, how these ideas have interacted in practice is directly related to the context and the circumstance in which they come together. The context of the 'Arab Spring' is perhaps exactly the sort of complex and dynamic convoluted circumstance that really challenges us to think clearly about how we use our air power. If we further complicate the situation with the emerging norm of responsibility to protect and the inevitable complexities of UN-mandated coalition operations, we can find ourselves very quickly trying to navigate a minefield of ethical, conceptual and pragmatic challenges.

Chief of Air Force noted in his opening address that diplomacy backed by credibility and capable air power has been a core element of our strategic security. But our speakers yesterday challenged us to think seriously about how and when and under what conditions force or threat or force, specifically air power, can not only be used to effectively coerce an adversary, but how this can be incorporated into a diplomatic process and strategy. Many of you might agree that there is no

consensus on this and perhaps no operational model to fit all situations. Air power as an element of coercive diplomacy does however enable a bridge between policy and strategy, providing a greater range of options to achieve limited objectives. It has a utility beyond simple kinetic effect. Successful coercive diplomacy needs to reflect proportionality, reciprocity and credibility.

One point made yesterday that struck me as fundamental to each of us as individuals and military leaders was that those who reside in zones of safety have a duty of care to those who live in zones of danger. Our work can never be divorced from the ethical and humanitarian values for which we stand. How we employ the forces we command in complex and dynamic situations when military end-states may be opaque is I would suggest one of the most important lessons that we should ponder. So what then in terms of impacts for air power?

This conference set out to provide a considered perspective on the contemporary and evolving international security environment and to investigate the use of air power in Libya within the context of the generally coercive strategy employed by NATO. Gaddafi's rationality was relevant to the success or failure of coercive operations in Libya, and the question of rationality of any actor will be central to the effectiveness of any coercive strategy. The Libyan air campaign offers us a unique opportunity to examine the use of modern air power and there is much we can take away from this. Many strong themes have already been exposed, but here are a few that I have captured:

- Air power at times may be the only viable military option to project force into a hostile territory. That projected force comes from an air base, fixed or floating, and, as was highlighted by our overseas presenters, that air base does not have to be your own.

- As we have heard repeatedly today, ISR, and lots of it, is integral to all our air missions.

- Capacity has a quality all of its own not only in capability, but also in response.

- A coalition, arguably, has a greater ability to coerce a belligerent than does an individual state.

- Precision is now the norm and expected by our governments. However, it is precision not just in the sense of weapons delivery, but also precision in judgement and advice, precision in timing, precision in strategy, precision in intelligence and precision in the employment of tactics.

- Collateral damage needs to be minimised in order to sustain legitimacy. Collateral damage continues to drive our weapons development, our TTP and, in some cases, our governments' acceptance of risk. Perhaps *Linebacker II* would not have been overly successful in Libya.

- Engagement breeds interoperability, which is fundamental to effective coalition operations, and I very much appreciate the level of engagement we have had at this conference over the last two days.

- Tailored air forces offer a range of options for force employment.

- Lastly, air power's flexibility, responsiveness and scalability offer governments credible and useful options.

Ladies and gentlemen, what I did not hear at any point during the last two days is that we, as like-minded air power advocates, are going down any wrong path. Although we might agree that the Libyan campaign was not a totally successful example of coercive diplomacy, the use of air power in coercive operations is undeniably effective.

Finally, I contend that the success of Operations *Odyssey Dawn* and *United Protector* might already have made a difference to the next time a belligerent country considers facing a unified coercive coalition.

Ladies and gentlemen, that closes my remarks and I would like to invite the Chief of Air Force, Air Marshal Geoff Brown, to the podium for his remarks and to close this conference.

Closing Address

Air Marshal Geoff Brown

Distinguished guests, ladies and gentlemen, it is my job to bring the conference to a close.

I think you will all agree with me that it has been a particularly successful conference. It has enabled us to have a deeper discussion on air power issues, whether it is hard or soft power. I think you would also agree with me that we have had some outstanding presenters. They have challenged us in many respects and we have been very fortunate to hear their points of view. We have spanned from international relations and diplomacy to some great presentations today on the use of force, and I think that has allowed us to reflect on our core business.

We are very lucky, and I think this group is a great representation of the common bond we have as airmen. I think we have a particular affection for our profession. If I was to ask anybody in the front row where they would rather be at the moment, whether they would rather be flying or sitting here in a conference, I know exactly what everybody's answer would be. That is actually our common language and we should never forget that. And I think sometimes, when it comes to what I refer to in terms of diplomacy, that is one of the advantages that we have got as air forces.

Now, of course, at this conference we have presented a very positive view of what air power can do and what it can achieve. But perhaps we should put a bit of balance in that and be realistic about its achievable effects, because one of our roles is to provide sound advice to Government.

One of the mistakes airmen have always made is a certain amount of triumphant projection of how well air power has done. Success during the Libyan campaign is no different and we must be aware that we can, at times, be overly parochial to our sister Services about the influence of air power.

I think we need to remember that we offer some essential advantages to the joint fight. But I always hark back to MacArthur's campaign in the Pacific, which was fundamentally an island-hopping campaign from New Guinea up to the Philippines. You can have arguments about which was the primary Service. You needed land-based air power to protect the sea convoys, and to protect the Army securing the islands. But without the Army actually securing the islands, there would have been no land-based airfields. As airmen we need to try a little harder on that joint perspective sometimes, otherwise we are in danger of not being listened to and that is one of the things we need to continue to push with our people.

There are a couple of things that I would like highlight from the presentations. Major General Margaret Woodward, I really enjoyed the way you put your presentation and the order in which you did. And I think it is one of the failings as airmen that we often have. If you noticed, part of her presentation was about basing; it was the first thing that she put up. Often, however, we just assume basing. The reality is it is probably one of the hardest things to get right. We are very fortunate in the Royal Australian Air Force; our Afghanistan campaign is very much dependent upon a base we have in the United Arab Emirates. A lot of our operations in our region have been enabled by the fact that we have very generous use of the Royal Malaysian Air Force's base at Butterworth. I think if I was to ask General North this question he would say that that is an absolutely critical thing to the projection of PACAF's air power. I think the lesson for all of us is that we are actually putting our bases together. We will probably always want to go with a coalition, and we probably should put some more capacity there than just for our own use, so that is probably a good lesson for the Royal Australian Air Force. The other aspect was tankers and that was the second thing that Major General Woodward mentioned. They are always the 'long pole in the tent' and, as some of us are struggling at the moment to get our tankers operational, that is a definite thing that we need to emphasise.

I look at air forces, in terms of organisations, a lot of the time with regard to what are their essential advantages. Armies have essential advantages, navies have essential advantanges and air forces have essential advantages. I always put them in four categories: speed, range, precision and strategic weight. That is fundamentally what I think we bring to the joint fight.

We had some great presentations on speed. It is not just about our platforms and Colonel Derek Joyce's presentation on the Canadian decision just to launch their aircraft without knowing exactly where they were being based I think is a common characteristic that we are willing to project as airmen. We have had similar circumstances here. We had a cyclone bearing down on a couple of our major towns in North Queensland and there was a requirement to actually evacuate one of the hospitals, about 180 patients. That was announced by the Premier of Queensland before there was any request for tasking or anything like that. We managed to actually have the aeroplanes up there in less than three hours and starting to do the task. But that is a danger for us, to a certain extent, because there is an expectation that we will actually achieve those time frames regardless of whatever preparedness requirements are put on us. And I think it is one of the things that we need to watch in the future.

On the subject of precision, thanks to our friends from the UK, I really took from that presentation just how high the bar has actually got. What I am hearing is that from Libya there was virtually no collateral damage. I think we need to be careful about that promise, depending on the nature of any future operations. I had a chat with General North at lunch and, if he does not mind me quoting him, he said,

'Even the best professional golfer will occasionally put one into the woods or the rough'. So let us be careful about that.

Just another point on precision because, again, it is one of our essential advantages, and I saw it in a number of the presentations. ISR is key, undoubtedly, but so is information sharing. You can have the world's best ISR but, if we are going to operate in a coalition, we need to find some way of sharing that information. That is a challenge that has been pretty obvious to us for the last 15 years and we still have not solved that as coalition members. We put a lot of emphasis on our platforms and weapons etc., but as we all get probably a little smaller, we are always going to be in a coalition. So we should spend a lot more time and effort on figuring out how we are going to actually share that essential information, because that essential information drives the precision that we have got.

Anyway, they are my couple of little takeaways from the conference.

As I bring it to an end, I would really like to thank all our presenters for challenging and informing us. To the scholars who have given us the firm foundations upon which to understand this subject in context, thank you very much. I also would like to thank the military representatives for giving us the benefit of your shared experiences and also your national perspectives. All of us have benefited from the sum of everybody's experience and knowledge.

The moderators have done an excellent job and I think the whole conference has really enriched our understanding of air power in general. I would like to say a couple of quick thank yous to my team at the Air Power Development Centre; it is quite a small team but I think you will agree with me that they do a wonderful job, along with International Engagement section, my protocol section and the team from Nos 22 and 28 Squadrons. Lastly, I would like thank and acknowledge our sponsors Boeing, L3, Rolls-Royce and DefenceHealth.

With that, ladies and gentlemen, I thank you all for attending and wish you a safe journey home and I declare the 2012 Air Power Conference closed.