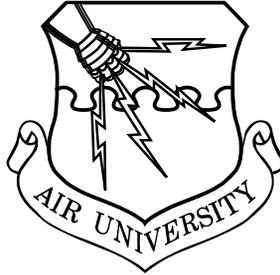


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Foreword

It is my pleasure to introduce the Air War College Maxwell Paper series as a compilation of the award-winning papers from our 2010 graduates. Since the first Maxwell Paper was published in May 1996, 47 papers demonstrating the highest level of analytical creativity and scholarship have been disseminated. The 12 papers presented here promote insight and discussion on topics of importance to senior leaders.

In the opening paper, Col Rolanda Burnett stimulates discussion by arguing that the Air Force master tenet of centralized control with decentralized execution is no longer applicable, he highlights key doctrinal strengths and weaknesses of the US Air Force master tenet and how it can be improved. In the following paper, Col Kenneth Hall describes the unintended consequence to the US vaccination program by the emphasis on bioengineered threats since 9/11. He concludes that we are all at great risk due to lack of attention on common disease that affects our entire population. Our Canadian International Fellow, Lt Col Michael Rafter, analyzes the legal and ethical implications of the 1970 US incursion into the Cambodia to determine if that course of action was justified and makes predictions on US ability to source the conflict based on public perception of the action.

Several of our papers address the influence of emerging technology and trends on US security strategy. Lt Col Kevin Coyne offers an analysis of the U.S. European Command's Intelligence, Surveillance, and Reconnaissance (ISR) strategy and suggests a road ahead for ISR integration. Col Rebecca Keller analyzes the intersection of influence (IO) and cyberspace operations. She identifies current operational and legal constraints in the execution of IO using cybertechnology and offers remedial actions to enhance the use of the Internet as a military IO tool in today's cyber world. Another International Fellow, Lt Col Lars Helmrich of the Swedish Air Force critiques US arctic policy and argues for an increased US leadership role. Lt Col David Baylor analyzes the changes of strategic calculus based on a reduction of nuclear weapons and asks the important question, "Are there different negotiation considerations and dynamics in play when Russia and the United States go below 1,000 strategic warheads?" These papers all tackle the influence of change on the strategic environment while another batch address how change should influence the Department of Defense (DOD). Lt Col Carl Schaefer, offers an assessment of DOD's procurement system and comes to the conclusion that the Services could learn from Special Operations Command's streamlined acquisition system. Lt Col James Michael Doolin offers an assessment of technologies to best meet US Transportation Command's need for a situational awareness tool. And Lt Col Matthew Smitham argues that the time is ripe for a US-led space traffic control system.

Finally, our series closes with a pair of papers that address DOD human capital challenges. Lt Col Julie Boit offers an analysis of the “Don’t Ask Don’t Tell” policy and offers specific policy implementation recommendations for the DOD. Col Stella Smith concludes the anthology with an examination of loss of intellectual capital in the number of undergraduate and graduate degrees earned in science, technology, engineering, and mathematics (STEM). Her analysis predicts dire consequences for the US technical base and our ability to deter future adversaries if this critical capability is left to atrophy.

Overall, the Maxwell Paper compendium provides a short summary of the best research at Air War College. I hope you will find that the papers stimulate thinking and discussion on a wide range of topics. As with all Maxwell Papers, the Air War College publishes this anthology in the spirit of academic freedom and open debate. We encourage your engagement on the issues the papers in this collection raise and solicit your responses.

ROBERT C. KANE
Major General, USAF
Commandant, Air War College

About the Authors

Lt Col David “DJ” Baylor is assigned to Air Combat Command (ACC), Langley AFB, Virginia. His assignments include weapons and tactics officer and scheduler, 79th Fighter Squadron, Royal Air Force (RAF) Upper Heyford, England, and instructor weapon system officer (WSO), training officer, and wing scheduler, 522d Fighter Squadron, Cannon AFB, New Mexico. At the 34th Bomb Squadron, Mountain Home AFB, Idaho, he was the chief of plans, responsible for the development of a “light strike” deployment package that became the standard for deployment of all B-1 units; to prove his concept, Colonel Baylor led two deployments to Shaikh Isa AB, Bahrain. For his innovative solutions to deploying the B-1, Twelfth Air Force twice nominated Colonel Baylor and his crew for the Curtis E. LeMay Trophy; his team won ACC’s outstanding bomber crew trophy in 1998.

Colonel Baylor has also served as an instructor WSO and flight commander at the B-1 schoolhouse, Dyess AFB, Texas, and later as the 7th Operations Group executive officer and assistant director of operations for the 9th Bomb Squadron, where he participated in Operation Enduring Freedom in 2002; the commander’s nuclear strike advisor and Mobile Consolidated Command Center chief, US Northern Command; and commander and professor of aerospace studies, The University of Georgia. He holds a BS, mechanical engineering, Pennsylvania State University, where he was a Distinguished Graduate (DG), Air Force Reserve Officer Training Corps; master of military operational art and science, Air Command and Staff College, Maxwell AFB, Alabama, where he was a DG; and master of strategic studies, Air War College, Maxwell AFB.

Lt Col Julie C. Boit is assigned to Headquarters Air Force, The Pentagon, Washington, DC. As a career personnel officer, she has served in several stateside and overseas assignments, including base-level tours at Kelly AFB, Texas; Kunsan AB, Republic of Korea; and RAF Mildenhall, UK. Colonel Boit has commanded at the flight, detachment, and squadron levels, leading the Military Personnel Flight, RAF Lakenheath, UK; Detachment 2, United States Air Forces in Europe (USAFE) Mission Support Squadron, Italy; and 437th Mission Support Squadron, Charleston AFB, South Carolina. Additionally, she has served at Headquarters Air Force Personnel Center, Randolph AFB, Texas, and at Headquarters European Command, Stuttgart, Germany. She is a graduate of the US Air Force Academy and earned a master’s degree in business administration from St. Mary’s University, San Antonio, Texas; a master’s degree in National Security and Strategic

Studies from Naval War College, Newport, Rhode Island; and a master's degree in Strategic Studies from the Air War College in 2010.

Col Rolanda Burnett Sr. is a foreign affairs specialist with the Office of the Secretary of Defense. He was the deputy chief, Air and Space Operation Center Requirements Division, Requirements Directorate, Air Combat Command headquarters staff, Langley AFB, Virginia, and commanded the 705th Training Squadron, 505th Command and Control Group, and 505th Command and Control Wing, Hurlburt Field, Florida. At the 609th Combat Plans Squadron and Headquarters Ninth Air Force, United States Central Command Air Forces, Colonel Burnett was pivotal in developing and executing the air campaign strategy in support of Operation Iraqi Freedom.

His other assignments include the 912th Air Refueling Squadron, Robins AFB, Georgia, where he deployed in support of multiple operations to include Desert Calm and Restore Hope; Kadena AB, Japan, where he was chief of navigation training, standardization and evaluation/instructor navigator, and flight commander/instructor navigator; and the 54th and 55th Air Refueling Squadrons, Altus AFB, Oklahoma, where he served as a Combat Crew Training School (CCTS) instructor navigator, executive officer, flight commander, and chief CCTS evaluator navigator. Colonel Burnett is a graduate of Air War College; the Army Command and General Staff College, Leavenworth, Kansas; and the School of Advanced Airpower Studies, Maxwell AFB.

Lt Col Kevin M. Coyne is a career intelligence officer with 20 years of signals intelligence experience at the operational and headquarters levels. He is the chief of the Intelligence, Surveillance, and Reconnaissance Policy Division, the Pentagon. He has served as commander, 390th Intelligence Squadron (IS), Kadena AB, Japan; board chair, Joint Staff/J2 Battlespace Awareness Functional Capabilities; and operations officer, 488th IS, RAF Mildenhall, UK. Prior to this, Colonel Coyne was the RC-135 program element monitor at the Pentagon, responsible for supporting aircraft and sensor procurement for all variants of the RC-135 fleet. At the 97th IS, Offutt AFB, Nebraska, he served as chief, Current Operations, and chief, Force Applications, providing airborne cryptolinguist support to RC-135 Rivet Joint, Cobra Ball, and Combat Sent operations.

At Headquarters USAFE, he served as an intelligence watch officer and as a focal point for intelligence relationships with NATO partners, overseeing the functional employment of theater signals intelligence systems and working reconnaissance employment issues. Colonel Coyne served as a flight commander at signals intelligence units in Korea and Greece supporting U-2 and RC-135 operations. He has

deployed in support of Operations Iraqi Freedom, Southern and Northern Watch, and NATO's Bosnia Implementation Force.

James Michael "Mike" Doolin led the chief information officer (CIO) Support and Distribution Portfolio Management Division, Command, Control, Communications, and Computer Systems Directorate, US Transportation Command (USTRANSCOM), Scott AFB, Illinois, where he was responsible for USTRANSCOM CIO support and management of the Department of Defense distribution information technology (IT) systems portfolio. Doolin is also a lieutenant colonel in the USAF Reserve, serving as a deputy operations center chief in the J3 at USTRANSCOM. Colonel Doolin recently served two years on active duty as a joint mobility operations officer in the Current Air Operations Branch of the USTRANSCOM Operations Center. These assignments enabled him to gain experience and insights into the daily operations of USTRANSCOM as the distribution process owner.

Doolin's combined civilian and military career spans over 34 years of federal service in the IT and logistics professions, including both line and staff assignments ranging from the squadron and group level as a traditional guardsman with the Hawaii Air National Guard to combatant command level as a civilian at both US Pacific Command and USTRANSCOM. He holds a master of science degree from Central Michigan University and is a 2010 graduate of Air War College.

Col Kenneth Hall is the deputy command surgeon, HQ USAFE, Ramstein AB, Germany. He has served as the commander of the 27th Special Operations Medical Group, Cannon AFB, New Mexico. Colonel Hall has supported numerous combat operations, including Operations Iraqi Freedom, Enduring Freedom, and Desert Storm. His other military positions include deputy command surgeon and command public health officer at Headquarters Air Combat Command, Aerospace Medicine Squadron commander, command public health officer and health promotion director at Headquarters United States Air Forces in Europe, chief of public health and prevention at the Air National Guard Readiness Center, medical inspector at the Air Force Inspection Agency, and base public health officer at state-side and overseas installations. Colonel Hall holds a bachelor's degree in biology from Virginia Tech, a doctorate in veterinary medicine from Auburn University, and a master's in public health from Harvard University and is a recent graduate of the Air War College. He is a chief Biomedical Sciences Corps officer and is board certified in veterinary preventive medicine.

Lt Col Lars Helmrich has been a pilot in the Swedish Air Force since 1990. Colonel Helmrich has served as commander of a Gripen squadron and as wing commander (flying). In 2008 he commanded

the Swedish Red Flag detachment. He is a graduate of the Swedish Defense College Staff Course and Senior Staff Course and is a recent graduate of Air War College.

Col Rebecca A. Keller is a career intelligence officer with one career broadening tour in the computer and communications career field. Her intelligence assignments have been varied and include signals and imagery intelligence, targeting, information operations, and collection management. Colonel Keller has served as a flight commander, operations officer, squadron commander, and deputy division chief on a major command staff. She was commissioned through the Air Force Reserve Officers' Training Corps, University of St. Thomas, St. Paul, Minnesota and is a recent graduate of Air War College.

Lt Col Michael Rafter is a member of the Canadian Forces. He has served on the North Atlantic Treaty Organization staff in the Allied Movement Coordination Center, Supreme Headquarters Allied Powers Europe, Mons, Belgium; as a United Nations peacekeeper in Haiti; and as an air mobility advisor to the African Union's Darfur Integrated Task Force, Addis Ababa, Ethiopia. His varied operational and headquarters assignments throughout Canada include postings to Kingston, Ontario; Goose Bay, Labrador; Winnipeg, Manitoba; Cold Lake, Alberta; Ottawa, Ontario; and Toronto, Ontario. As an air mobility officer, he qualified as a loadmaster on the C-130 Hercules aircraft and travelled extensively in support of Canadian Forces operations in the Arctic, the United States, Europe, Africa, and Australia.

He holds a bachelor of arts in history from the Royal Military College of Canada and completed his training as a logistics officer with a specialization in movements and transportation. Colonel Rafter has a master of arts in war studies and defence studies from the Canadian Forces Joint Command and Staff Program and a master of strategic studies from the USAF Air War College.

Col Carl Schaefer is the commander of the 46th Operations Group, Eglin AFB, Florida. He has served as a squadron commander, a T-38 instructor pilot (IP), and an F-15E IP and led combat missions during Operation Allied Force. Colonel Schaefer graduated from the USAF Test Pilot School in 2000 and has conducted developmental flight tests in the F-15, F-16, and T-38. A command pilot with over 2,800 hours in 30 aircraft types, Colonel Schaefer is a United States Air Force Academy, Air Force Institute of Technology, and recent Air War College graduate.

Col Stella Smith is the commander of the 552d Maintenance Group, Tinker AFB, Oklahoma. Her operational assignments include various aircraft maintenance positions at Griffiss, Kunsan, McChord, and Tinker Air Force Bases. She has also held staff assignments do-

ing research at the Air Force Logistics Management Agency, managing aircraft maintenance contracts for Air Education and Training Command, and serving as a Headquarters Air Force legislative liaison to the US House of Representatives.

Colonel Smith deployed in support of Operation Iraqi Freedom, standing up the strategic airlift maintenance capability at Balad, Iraq, as well as to Headquarters European Command in support of Operation Enduring Freedom. Colonel Smith commanded the 62d Logistics Support Squadron, 62d Maintenance Squadron, and 332d Expeditionary Aircraft Maintenance Squadron and was the deputy commander of the 552d Maintenance Group. She holds a bachelor's degree in Soviet area studies from the US Air Force Academy, a master's degree in maintenance management from the Air Force Institute of Technology, and a master of strategic studies degree from Air War College.

Lt Col Matthew C. Smitham is assigned to the Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics, Space and Intelligence Capabilities Office, the Pentagon, Washington, DC, where he oversees major system acquisitions within the space and intelligence portfolios for the Department of Defense. He was the payload deputy program manager for a next-generation imaging satellite constellation at the National Reconnaissance Office, Chantilly, Virginia, and led a system program office that directed a contractor team in the development, integration, test, launch, and initialization of the mission payload.

Colonel Smitham has served in a variety of technical management, leadership, and staff positions in the Air Force. Previous assignments include Air Staff positions as a program element monitor and deputy division chief in the Directorate of Information Dominance, Assistant Secretary of the Air Force (Acquisitions), Washington, DC; research, development, and program management positions at the National Reconnaissance Office, Chantilly, Virginia, in the Advanced Science and Technology and Signal Intelligence Directorates; and scientific researcher to mitigate space weather impacts on US space systems at the Space Vehicles Directorate, Air Force Research Laboratory, Hanscom AFB, Massachusetts. He holds a BS in physics, University of Washington; an MS in engineering physics, Air Force Institute of Technology; an MA in military operational art and science, Air Command and Staff College, Maxwell AFB, Alabama; and a master of strategic studies, Air War College.

