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Order In Chaos: The Future of Informed Battle Management and Command and Control

By Col Tom Nicholson and Lt Col Nelson Rouleau, USAF
On behalf of "Project Everest"

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Abstract

The United States military has established impressive proficiency in the intelligence, surveillance, and reconnaissance (ISR) enterprise in modern warfare, to the point where it can master the "observe" and "orient" elements of Col. John Boyd's "OODA Loop" across the spectrum of conflict. But with the growth in the volume of information available, and an anticipated increase in duration and intensity of potential future combat operations, the potential for saturation of centralized decision-makers using this ISR requires a relook at tactical command and control (C2).

By reaching back to a Combined Air Operations Center (CAOC), time and context is sacrificed, simplifying adversary war plans to target, saturate, and disrupt US information links. Distributing this decision-making means informing personnel on the edge combat, who can tighten the "decide" and "act" segments of the loop. The authors propose a concept that enables access and search capability of highly classified networks to airmen aboard airborne C2 platforms, and thereby enhances survivability, and accelerates decision-making. Pushing this capability out to airmen would help the US and allies outpace adversaries beholden to a C2 construct tied to senior officers, and would allow joint force operations to adapt to the fog and friction of war.

With near peer rivals mastering their own precision strike and information warfare capabilities, the military must adapt to prevent foes from attacking the datalink system that serves as the spine of the US military's decision-making brain. By doing so, we will enable our forces to continue to dominate the C2 battle in any conflict.

Introduction

Effective control of forces in combat has served as a fundamental tenet of successful modern US military operations. Since Operation Desert Storm in 1991, the US Air Force has served as a force multiplier through pioneering use of its combined air and space operations centers (CAOCs), forwarding a concept known as "centralized informed battle management and command and control" (BMC2).

This capability has proved remarkably successful, allowing freedom of action for joint task forces across a given conflict or contingency, orchestrated by the command and control (C2) and battle management (BM) capabilities contained in a CAOC. But today, US forces are on the cusp of a new era, with modern threats and a more complex operating environment where modern air defenses, aerial threats, and proliferated space and cyber weapons now threaten the American way of war in potential flash points around the world.

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This trend begs a discussion regarding the future of centralized, informed BMC2 practices. Should USAF, having built up and demonstrated widespread effectiveness in operations by using "reach back" networks to inform a geographically fixed C2 hub (a CAOC) to orchestrate actions in a given contingency, persist in operating this construct as the definitive model for future air combat operations? Or, will modern trends, threats, and near peer state actor capabilities require a strategy and operating concept where data, agnostic of source, is fused and analyzed from a constellation of sources. These include traditional intelligence, surveillance, and reconnaissance (ISR) sources, and non-traditional ISR nodes such as F-22, F-35, and the future B-21 bomber. All of which can be made accessible to distributed C2 nodes. At these nodes, analysts and decision makers within the line of sight (LOS) of the front edge of combat operations can customize and deliver information and direction to individual airmen, aircraft, combat elements, and other components of a joint force operation—to assure favorable initiative is maintained in battle. The authors submit this construct, dubbed "distributed informed BMC2," is integral to building towards a future "combat cloud" operating construct, and would fare far better in modern threat environments.[1]

Connecting Dots

Harnessing technological innovation is a difficult business. "You can't connect the dots looking forward," the late Apple chief executive Steve Jobs once said. "You can only connect them looking backwards."

A new device, technology, or tool simply opens up opportunity, but human beings must exploit it, properly, in order to realize its full potential.[2] Why then, do some civilizations walk through the door while others do not?[3] Jobs, arguably one of the greatest imaginative thinkers in modern times, described how some humans may find a well lit path through experience and study, and these thinkers connect the dots from their experiences in a way others cannot.[4]

With this insight in mind, the answer to the Department of Defense's (DOD) current dilemma on how to fight in the satellite and datalink congested age of the 21st century may already be in front of us. While a single theory cannot provide all answers, this paper attempts to connect the dots with regards to the future of BMC2 for aerospace power practitioners and decision makers who are facing an increasingly complex world.[5]

The authors arrive at this discussion with significant experience in modern ISR, C2, and BM operations, with combined operational and combat experience in the E-8C Joint Surveillance Target Attack System (JSTARS), RC-135 Rivet Joint ISR aircraft, and the E-3 Airborne Warning and Control System (AWACS) executing ISR and BMC2 tasks extensively in a variety of scenarios and operations. When one considers the roles of the E-8, RC-135, and E-3, it is evident these aircraft have been thoroughly involved in the tactical and operational implementation of informationized warfare for decades. During that time, the US precision strike regime matured through the evolution of smart weapons and stealth delivery, to strike actions enhanced and defined by informed targeting via technologically advanced sensors and movement of the sensor data to decision makers.

Critical mass of information in war has become just as valuable as critical mass of firepower in deciding combat outcomes. Air, space, and cyberspace intelligence contributions, sent into CAOC hubs, allow operational commanders to gather and assess the informational context of any engagements presented to them via a CAOC—normally located in a geographically separated environment, relatively safe from adversary attack. Datalink capacity allows effective movement of sensor data and human communications between personnel and machines in line of sight within the conflict area, and beyond line of site (BLOS) for analysis, decision-making, and action. American military forces share the information context of a conflict at a volume and speed that allows an on-scene commander to develop and confirm informed battle management decisions by reaching back into the hub of operations awareness (nominally a CAOC) at a tempo that enables superior maneuver and strike against the enemy.

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Evolving Adversaries and Big Data

The world, however, is changing. It is uncertain if the United States will face a near-peer adversary able to deny air, space, and cyber supremacy in a future conflict. But it is certain that such adversaries exist, and have been carefully observing the American way of informationized war to discern and exploit weakness. These potential adversaries have also been more frequently experimenting with tactics and technologies that seek to disrupt the American military's strengths—in particular its shift over the last 25 years towards highly centralized command and control.

Rivals understand the rapid tempo of the US military's find, fix, target, track, engage, and assess (F2T2EA) process, and actively seek to deny information and its movement in combat, as information lies at the core of US maneuver and strike decision advantage. Rivals also seek to create doubt as to the validity of information, knowing rapid collection, analysis, and redistribution capabilities can be brought to bear by US forces. This advantage is the foundation for American forces ability to maintain initiative, and dictate the terms that any battle will be fought under.

Rivals have recognized precision weapons do not inform what or where to strike to bring about the desired outcome in a confrontation. Human beings must interpret information, decide what to strike, how to strike it, and direct weapons. Today, American commanders harness an entire ISR constellation, connected by robust datalink architecture from a fixed CAOC, to rapidly assess the context of a contest, and distribute orders for action. Adversaries recognize that datalinks must move information fast enough to allow cycle time through this decision-making hub to enable a commander to choreograph battle armed with sufficient understanding to achieve a high probability of success. Such context provides adversary disposition, intent, and will to persist in a conflict, which allows an understanding about the effect of action to deter or compel adversary behavior.

In response, rivals have developed their own precision strike regimes, and plan to deny the United States its own when conflict emerges. The recent open and public Russian involvement in Syria, its rapid movement of aircraft and missile systems into the region, and its well-publicized cyber activity effectively demonstrates the Russian ability to achieve desired effects. The Russians are absorbing and learning about the tempo and context of the American informationized way of war. Concerns about satellite vulnerability have also grown, as new strike technologies that have the potential not only to hold American information collection and connectivity at risk but also threaten maneuver of unmanned reconnaissance and strike machines are under development.

Yet, potential adversaries are not the only challenge. Even if the United States is successful in maintaining supremacy in air, space, and cyberspace, the scale and magnitude of a potential conflict with a near-peer rival will place enormous demand on the throughput of information and data across satellite reach back networks that remotely reconstruct the events of battle.

The challenge of moving huge amounts of information may serve as a "Big Data" advantage counter point. Rather than benefitting from searching and sifting a massive archive of data and information to glean useful knowledge about an adversary in the relatively unsaturated environments of today's asymmetric fights, airmen engaged in tomorrow's wars must cycle the entirety of real time (and archived) contextual information from a proliferation of sensors in a battlespace that will likely be a larger and more complex operational environment.

Even with the existing CAOC-driven information system (with large amounts of computing power, satellite data connectivity, and deep resources in human analysis), the sheer volume of information in such a contingency will require prioritization. Priorities will need adjustment once combat ensues, and the information which built the original priorities will begin to represent an out of phase, or even incorrect, representation of the actual context of the conflict.

The reach back capability to a CAOC may require too much time for a rear echelon commander to complete a orient, observe, decide, and act cycle (the "OODA loop"), and maintain a tempo that assures US initiative and success.[6] In addition to dealing with a tremendous amount of data, a significant portion may actually no longer be valid or it could be incorrect because of the rapid pace of combat. Much like the famous puzzle game "Tetris," the "blocks" of information will arrive so fast as to thwart and obstruct any effort to sort, prioritize, and place the information necessary for advantage—then creating its own unique disadvantage.

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How can this problem be solved? A look at a recent exercise, Red Flag 16-1 at Nellis AFB, Nev., provides a view into recent thinking about how to meet the challenges in this type of war. At the exercise, carried out from January to February 2016, organizers and planners added more personnel to the CAOC "hub" at Nellis – putting more people into the facility to sort data, and make sense of it.

This approach was only a partial solution, however. Increased human processing worked to sift, sort, analyze and distribute information when afforded sufficient time. But the additional personnel, in some cases, inhibited the rapid wielding of real-time information—more people involved in a given OODA cycle meant it took more time to reach "act." These personnel required information about the state of the conflict linked back to them to "orient," and the human awareness processing capacity to wield that information without missing its context, incorrectly prioritizing efforts, or simply taking too long to decide. They had to absorb larger amounts of data to comprehend the battle's disposition, and then feed information into the front edge of combat at a pace that retained the initiative. In some cases, they ended up out of phase with the tempo of combat, delayed by trying to extract, analyze, and act on increasing amounts of data. This created an OODA loop of greater size and duration than the much tighter OODA loop occurring at the front edge of a potential conflict, where dozens or hundreds of events may be unfolding in real time—each with its own level of complexity. Much like centrally planned economies are challenged to adapt to free market principles, so too does the centrally focused CAOC-linked battle decelerate the American way of war as time progresses. A slowing wartime tempo will cede initiative, and erode combat effectiveness. We must be careful not to let this happen, as we have already observed in Syria, relative to the modality of Russian approaches to operations.

There is another way to think about this challenge we should consider. Huge amounts of data are becoming available from newly fielded technologies that are driving ISR production. For instance, consider the amount of full motion video (FMV) collected by RQ-4 Global Hawks and MQ-9 Reapers alone, in Afghanistan, Iraq, or Syria. Transpose those FMV capabilities to a new potential conflict, such as on the Korean Peninsula, where potentially hundreds of opposing actions may take place concurrently. Should the massively increased volume of information continue to be collected and sorted at a CAOC, or is there advantage in allowing a larger number of "nodes" present among friendly forces to collect this information? These nodes would be better placed to concurrently experience and observe the battle within the line of sight of the front edge of combat, and to distribute assessed and prioritized information aligned with the commander's intent.

The Case for Node-based Informed BMC2

Agile C2 nodes, unlike a fixed CAOC, promise to combine relevant sensor data with valuable context observed in the forward area of battle. A node operating in the line of sight to combat requires less reconstruction of context due to its co-located proximity, reducing the amount of information movement needed via datalinks.

When a node is hosted on an airplane, it then has the capability to relocate for survivability, based on data collected from its own onboard sensors, and matched to information its crew fuses from other linked ISR sources. At the same time, it can also disseminate the same information to friendly forces via robust LOS communications. In its distribution role, this node meters the flow of customized information to friendly forces. By reducing the amount of contextual information needed due its point of presence, the aircraft and its crew can focus on available, differentiating intelligence information, and make decisions faster. Context by proximity requires no datalink transport, and minimal new comprehension.

This type of "informed BMC2" is already evident in airborne platforms where ISR is mated with BMC2, such as the E-8 JSTARS.

Onboard battle managers and intelligence officers, such as USAF air battle managers (ABMs) on board an E-3 AWACS, or an integrated intelligence officer (IIO) onboard an RC-135 Rivet Joint or E-8 JSTARS, focus on value-added information accessed by their own initiative, based on priorities adapted to meet the existing mission. This task can account for the fog and friction of the conflict, if for no other reason because of the nature of their colocation with their C2 aircraft. These ABMs and IIOs onboard American C2 aircraft have access to similar information used by CAOC-based decision makers. An agile aircraft-based node, as a result, can preserve the F2T2EA decision-making tempo advantage and capability of a CAOC. This tempo can even be accelerated, as the aircraft can serve as an on-scene battle manager, in a given scenario, accessing and distributing information. The more information made available to a battle manager or intelligence officer at a particular node, through onboard sensors or access to ISR networks where collected data resides, the more valuable these nodes become.

This type of "informed BMC2" is already evident in airborne platforms where ISR is mated with BMC2, such as the E-8 JSTARS. The JSTARS' powerful wide area surveillance radar can survey and scope out a large surface area of operations, and use secure networks to overlay even more levels of intelligence, information, and analysis on an adversary's disposition and intent. The E-8 JSTARS crew can use several communication options to distribute information to a variety of friendly forces in a conflict.

In effect the JSTARS is a sort of air component equivalent to General Motors' commercial "On Star" communications, security, and navigation network equipped in many of its vehicles. The JSTARS crew generates the information needed for customized decisions within a battle, allowing strike elements to sip a "soda straw" of information to act decisively, rather than an element of the strike package having to sift through the equivalent of a fire hose of data in order to find what is necessary to act. The aircraft's functionality as a forward based node, its proximity to the front edge of battle, and inherent agility allows for collection and dissemination of information aligned with a commander's intent. The effect is much like putting a CAOC's combat operations division (COD) staff in a forward line of sight position to administer the battle.

One of the primary arguments for a "node" based method of battle-space information distribution is built around the potential savings in time such a method could achieve, and the potential decrease in need to send large volumes of data back to CAOCs – as machine and human capacity alike would be challenged by the movement and comprehension of archived and real-time big data in a more centralized construct.

A forward-based node transports less data, and considers only what is relevant in its line of sight pursuant to successful execution of mission orders. A lower volume of data movement required for context, combined with more knowledge about geographically relevant and timely all-source data, offers a significantly accelerated F2T2EA velocity.

The value of such node-driven operations is already born out on a tactical level, evidenced by the battle management practices of Special Operations Forces (SOF). One need only adjust the scale of application. Though there are complexities that come into play with the transition to an operational level "informed BMC2" node, the American competitive advantages in combat decision-making competency remain constant.

As well, airborne BMC2 platforms already exist, and can be operationally enhanced through improved network connectivity, training, and the development of improved concepts of operation. Increased investment in such manned aircraft for informed BMC2 makes sense from a data distribution, decentralized execution, and hardware point of view, to maintain decision advantage and initiative.

Hardware parity is a well-documented and serious concern, and software parity, or the ability to provide direction to artificial intelligence to automate tasks for combat advantage, is not far behind. But human beings remain infinitely reprogrammable, and adaptable to evolving methods of warfare.

Unpredictable Geography and the Point of Violence

During 2011's Operation Odyssey Dawn in Libya, where conflict erupted in a region not sufficiently covered by a CAOC or a robust ISR constellation, a manned, airborne BMC2 function was brought together and placed on scene within days, in the form of the E-8C JSTARS.

While AWACS could sort and track activity in the air domain, JSTARS' powerful ground moving target indicator (GMTI) sensor allowed immediate sorting and prioritizing of adversaries on the ground, and line of sight communication to all US and coalition forces to provide target information. This capability proved valuable in prosecuting airstrikes during the campaign. If a JSTARS was not on station, strike aircraft returned to base loaded with ammunition and bombs. With JSTARS on station, they often returned empty.

In addition, JSTARS aircrew actively reached out for "value added" intelligence information to overlay on top of its wide area surveillance surface radar to identify and pass along better information on targets. There was no time to build a CAOC or position a robust ISR constellation. Speed, range, loiter time, communication, sensor connectivity, and informed air battle managers working with airborne intelligence officers were available to replicate the informationized warfare capabilities of a CAOC's combat operations division at the front of battle. In this way, as a hedge against the uncertainty of who, where, or what level of competence the United States military will be asked to fight, the JSTARS-type marriage of a robust surface sensor, classified ISR access and analysis via appropriate network datalinks, combined with trained airmen battle managers and intelligence officers, may be an investment proposition to seriously consider.

The JSTARS call sign— "Trump Card"—is telling of its utility in combat, and shows that a combination of sensors, trained personnel, and robust connectivity can effectively hedge against many of the uncertainties one can expect in future combat scenarios.

Reprogrammable Airmen and Future Warfare

The duration of US weapon system production times are increasing, due to political inaction and a congested acquisition process. At the same time, due to the advent of the information age and the rapid distribution of technology, adversaries are catching up to and in some cases exceeding US military capabilities. Hardware parity is a well-documented and serious concern, and software parity, or the ability to provide direction to artificial intelligence to automate tasks for combat advantage, is not far behind. But human beings remain infinitely reprogrammable, and adaptable to evolving methods of warfare. What's more, each culture possesses distinct competitive advantages upon which they may capitalize. Writing about offensive strategy, Sun Tzu explained that one should "know the enemy and know yourself."[7] The enemy always gets a ballot in war, and the more information one can obtain about him, the greater the chance of prevailing successfully. Armed with the right platform to arrive on scene, with the ability to rapidly relocate, communicate, and inform provides human beings with a powerful tool to adapt to future challenges and maintain American initiative in warfare. The investment made in putting personnel in close proximity to the point of violence ensures the critical thinking skills of American company and field grade officers will continue to be a competitive advantage in conflict, and will help ensure future success.

Warfare's Future: Distributed BMC2 as a Deterrent

Planning for potential decisions, of ally and adversary alike, is more difficult than planning for the potential decisions of one commander – particularly if a planner can cut off or manipulate the information flowing to a single commander. Many tactical commanders, with a line-of-sight presence and perspective to the edge of conflict, can have additional awareness provided to their already contextually informed position. In this scenario, high fidelity data, fused intelligence, analysis, and awareness of actions within the digital space, allow informed BMC2 nodes to carry out operational command orders. Provision of high fidelity contextual data to distributed BMC2 nodes allows conflict choreography to continue even if datalink connectivity is compromised – by harvesting LOS battle-space sensor context, and choreographing friendly combat elements amidst adversary actions.

Using the example of the JSTARS, the human aircrew may perform similarly to the leadership team comprising the combat operations division of a CAOC. With the benefits of top secret secured compartmentalized information (known as TS/SCI), and robust line of sight connectivity to air, ground, joint, coalition, and interagency actors, a JSTARS crew uses its wide area radar coverage as a baseline gauge of theater activity, essentially establishing a host of eligible targets. At the same time, a JSTARS would harness its high fidelity sensor mode along with other sensors and information obtained via datalink to conduct onboard real-time analysis for use by trained air battle managers. ABMs can then disseminate the right amount of context and direction to each US and allied element in the conflict, and continue to provide such custom solutions should datalink compromise occur.

An adversary, challenged to understand the actions of multiple autonomous and capable combat "bubbles" would have a more difficult time achieving success. Each node enjoys a level of autonomy to maintain initiative, and superior decision-making tempo. An adversary, burdened with "reaching back" to a node to get direction, will cede the initiative. If the adversary does not seek guidance, this decision then pits junior officers and enlisted in each force against one another. Not knowing which side has the advantage in such a scenario of increased complexity frustrates an adversary's ability to predict actions and outcomes. In this manner, nodes of combat decision-making awareness and authority may act as a deterrent. An element of uncertainty arises in regards to an adversary's ability to calculate their potential for success in this environment.

Finally, with the American way of war so dependent on datalinks for informed BMC2, whether hub or node style, removal of these datalinks becomes the adversary's primary objective. The United States, fighting without network connectivity, removes a significant and decisive American advantage. With a node approach, C2 connectivity to the line of sight of the edge of conflict persists, with situational awareness achieved through datalink reach back at the time of loss. Thus, information is continuously updated and available to the airborne platform via traditional line of sight means. This information can still be inserted directly into every line of sight cockpit or ground radio within that combat bubble. Potentially degraded, but still viable. In addition, the aircraft, with its onboard C2 assessment and decision-making authority and line of sight connectivity, has the potential to pick up responsibility for remote piloted aircraft, by directly providing line of sight inputs if satellite reach back is lost.

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Summary: Complexity and Future Conflict

As the magnitude and volume of war increases in a conflict, so too will the complexity of presentation required to maintain effective situational awareness. Data movement required to meet this complexity at a "hub" will increase dramatically, placing increased risk to the remote commander's ability to maintain situational awareness and distribute direction because both are directly reliant on datalink connectivity required to maintain data flow. An airborne, re-locatable informed BMC2 node can serve as an agile, survivable hedge against space-based datalink compromise.

It is possible larger potential combat scenarios, involving the militaries of near peer nations for example, will require a strategy where individual, fused, and analyzed sensor data from many ISR sources is available to informed BMC2 nodes. Aircraft with distributed human intelligence analysts and BMC2 decision-makers, placed within the edge of a conflict, will have to deliver customized information and direction to individual combat elements. Such presence and capability will allow the information and precision driven American way of war to persist by leveraging our key unique competitive advantage–the ability to distribute the C2 of battle to junior officers and NCOs.

At the peak of the 1961 Cuban missile crisis, President John F. Kennedy famously commented that "there's always some poor son of a (gun) who doesn't get the word." Kennedy saw that, in any crisis, some individual or group would inevitably fail to connect the dots, leading to potential mission failure. The debate over the necessity to change how the United States Air Force thinks about warfare exemplifies the president's proposition that the effectiveness of individual unit actions must align in purpose with national objectives, even as they encounter uncertainty at the point of execution.

Those who believe the established method of information movement and action is sufficient to ensure success in future combat perhaps may have not yet connected the dots. ✪

Endnotes

1 Deptula, David A., *Evolving Technologies and Warfare in the 21st Century: Introducing the "Combat Cloud,"* Mitchell Institute Policy Paper Number 4, Mitchell Institute for Aerospace Studies, September 2016, http://media.wix.com/ugd/a2dd91_73faf7274e9c4e4ca605004dc6628a88.pdf (accessed February 2017).

2 White, Lynn, *Medieval Technology and Social Change,* (Oxford University Press, 1966), 28.

3 Author's note: White made the case for cultural determinism while tying his argument to the imagination of leaders. White, Lynn, *Medieval Technology and Social Change,* 28.

4 Author's note: In his 2005 commencement address to Stanford University, Jobs explained how he connected his attendance in a calligraphy class to the beautiful typography designed into the first Macintosh computer. "I learned about serif and san serif typefaces, about varying the amount of space between different letter combinations, about what makes great typography great. It was beautiful, historical, artistically subtle in a way that science can't capture." Jobs connected the dots available to everyone, but only visible to him, " . . . ten years later, when we were designing the first Macintosh computer, it all came back to me. And we designed it all into the Mac." http://news.stanford.edu/news/2005/june15/jobs-061505.html (accessed February 2017).

5 Author's note: There are at least two competing theories that attempt to explain the development and utilization of technology in society. Technological determinism suggests technology may determine a society's political, social, economic, and cultural norms. On the contrary, social constructivism opines society influences technology. Kenneth Waltz argues theory goes beyond the facts of the observable into explanatory power. This paper uses theory as Waltz would. For additional inquiry into the purpose of theories, I offer two authors: Michael Doyle and Hal Winton. Doyle's *Ways of War and Peace* outlines how theories help humans interpret history in the present and the past. Winton's *An Imperfect Jewel* specifically offers five attributes of a theory.

6 Author's note: An advance in technology or the loss of vital technology requires one to adapt quickly and seize the initiative before the enemy does. Air Force Col. John Boyd suggested it is essential to have a repertoire of orientation patterns and the ability to select the correct one according to the situation at hand while denying the opponent the latter capability. Quick reactions by the strategist in response to technological changes, combined with the ability to orient correctly and to mitigate surprise by the enemy, all while critically reflecting on military theory, gains the initiative toward shaping the war environment and its response to the change. Frans P.B. Osinga, *Science, Strategy and War: The Strategic Theory of John Boyd* (New York, Routledge, 2007), 173.

7 Sun Tzu, *The Illustrated Art of War: The Definitive English Translation*, trans. Samuel B. Griffith, (Oxford University Press, 2005), 125.

About The Mitchell Institute

The Mitchell Institute educates the general public about aerospace power's contribution to America's global interests, informs policy and budget deliberations, and cultivates the next generation of thought leaders to exploit the advantages of operating in air, space, and cyberspace.

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About the Authors and "Project Everest"

Col Tom Nicholson, USAF, is Chair, Department of Aerospace Studies at the University of Arizona. Prior to his current position, Nicholson served as the 461st Operations Group Commander, 461st Air Control Wing, Robins AFB, Georgia. His other assignments include serving as the director of the KC-46 Test and Evaluation Integrated Product Team, and the Domestic Response and Internal Investments Branch Chief at US Northern Command's resources directorate. He has also commanded the 763rd Expeditionary Reconnaissance Squadron, responsible for RC-135 combat operations within US Central Command's area of responsibility. Nicholson is a graduate of the US Air Force Academy, and received his masters in social science at the Maxwell School of Public Policy, Syracuse University, and his MA in psychology and counseling from the University of Colorado. He received his MS from the National Defense University at Fort McNair, Washington, D.C.

Lt Col Nelson Rouleau, USAF, is a veteran air battle manager, and commander of the 12th Airborne Command and Control Squadron, 461st Air Control Wing, Robins AFB, Georgia. Prior to his current assignment, he was chief of the Pacific Air Forces Strategy and Campaigns office at Headquarters Pacific Air Forces, Joint Base Pearl Harbor-Hickam, Hawaii. Rouleau served as a military assistant to Andrew Marshall in the Secretary of Defense's Office of Net Assessment (ONA), and as an airpower strategist in the "Checkmate" office of the Air Staff, Headquarters Air Force. Rouleau is the founder of the grassroots think tank, Project Everest, and has both a bachelors of science and masters of science from Troy University, as well as a master of philosophy from the School of Advanced Air and Space Studies, Maxwell AFB, Alabama.

Founded in 2011 by a group of Air Force strategic policy fellows, Project Everest is a diverse network of individuals motivated to engage on strategic issues facing the United States. The project grew out of the founder's sense that the services would lack the strategic depth needed to confront the nation's future threats, absent the opportunity for recurrent engagement. The project allows service members, Department of Defense civilians, and various outside experts the chance to tackle complex problem sets in a manner conducive to forward-looking thinking. Project Everest believes in building bridges between operational and substantive experts in the defense community, and fostering a network centered on strategic problem solving.