WINTER 2010
VOL. 3, NO. 1

THE CANADIAN AIR FORCE JOURNAL

IN THIS ISSUE:

Photo : Capt Reil Erickson

PRODUCED BY
THE CANADIAN FORCES
AEROSPACE WARFARE CENTRE

Canada
National Defence Défense nationale

THE CANADIAN AIR FORCE JOURNAL is an official publication of the Chief of the Air Staff and is published quarterly. It is a forum for discussing concepts, issues and ideas that are both crucial and central to aerospace power. The *Journal* is dedicated to disseminating the ideas and opinions of not only Air Force personnel, but also those civilians who have an interest in issues of aerospace power. Articles may cover the scope of Air Force doctrine, training, leadership, lessons learned and Air Force operations: past, present or future. Submissions on related subjects such as ethics, technology and Air Force history are also invited. This *Journal* is therefore dedicated to the expression of mature professional thought on the art and science of air warfare and is central to the intellectual health of the Air Force. It serves as a vehicle for the continuing education and professional development of all ranks and personnel in the Air Force as well as members from other environments, employees of government agencies and academia concerned with Air Force affairs. ■

Published by Canadian Forces Aerospace Warfare Centre, Trenton, Ontario
ISSN 1916-7032

NOTE TO READERS

As a bilingual journal, readers should take note that where quotations are translated from their original language, we will use the term [Translation] at the end of the quote to indicate that readers can find the original text in the other language version of the *Journal*.

THE CANADIAN
AIR FORCE JOURNAL

SUBMISSION REQUIREMENTS

THE CANADIAN AIR FORCE JOURNAL welcomes the submission of articles, book reviews and shorter pieces (which will be published in the Letters to the Editor, Points of Interest and Pushing the Envelope sections) that cover the scope of Air Force doctrine, training, leadership, lessons learned and Air Force operations: past, present or future. Submissions on related subjects such as ethics, technology and Air Force history are also invited.

JOURNAL SECTIONS

Item	Word Limit*	Details
Letters to the Editor	50-250	Commentary on any portion of a previous *Journal*.
Articles	3000-5000	Written in academic style.
Book Reviews	500-1000	Written in academic style and must include: • the book's complete title (including sub-title); • the complete names of all authors as presented on the title page; • the book's publisher, including where and when it was published; • the book's ISBN and number of pages; and • a high resolution .jpg file (at least 300 dpi and 5 by 7 inches) of the book's cover.
Points of Interest	250-1000	Information on any topic (including operations, exercises and anniversaries) that is of interest to the broader aerospace audience.
Pushing the Envelope	250-2000	Forum for commentary, opinions and rebuttal on *Journal* articles and/or issues that are of interest to the broader aerospace audience.

* Exclusive of endnotes

AUTHORS ARE ASKED TO NOTE THE FOLLOWING GUIDELINES

- Submissions may be made in either official language.
- Authors must include a brief (one paragraph) biographical sketch which includes current appointment /position, telephone number and email address. Please include all professional and academic designations as well as military decorations.
- Selected articles that have been peer reviewed have a  to the left of the title or at the beginning of the text of the article.
- The Senior Editor will notify contributors on the status of their submission. It may not be possible to publish all submissions.
- All text submissions must be digital, in Microsoft Word or rich text format. Files must not be password protected and must not contain macros. Files may be submitted by mail or email at the addresses provided below.
- All supporting tables, images and figures that accompany the text should be sent in separate files in the original file format (ie., not imbedded in the text). Original vector files are preferred; high resolution (not less than 300 dpi) .psd or .jpg files may be submitted.
- Copyright permissions are required for all material that is not Department of National Defence or author originated. It is the author's responsibility to obtain and submit the necessary written permissions which must include the author's/artist's name as well as the publisher's name and location. Any material not meeting these requirements may be omitted from the article.
- The Senior Editor may select images or have graphics created to accompany submissions.
- Authors should use *Oxford English* or *Petit Robert* spelling. When required, reference notes should be endnotes rather than footnotes and formatted in Chicago style. For assistance refer to *The Little, Brown Handbook*, *Le guide du rédacteur* or CFAWC Production Section at Francoise.Romard@forces.gc.ca
- Acronyms and abbreviations should be used sparingly:
  - If they are required in the text, the term is to be written out in full the first time it is used and then followed by the abbreviated form in brackets.
  - If they are required in tables or figures, each table and figure will contain a list of abbreviations.
  - A list of all abbreviations (and their terms) used in the text will be included at the end of each submission.
- The Senior Editor reserves the right to edit submissions for style, grammar and length, but will not make editorial changes that will affect the integrity of the argument without consulting the author.

FOR FURTHER INFORMATION OR TO MAKE A SUBMISSION PLEASE CONTACT THE EDITOR AT:

Canadian Forces Aerospace Warfare Centre
8 Wing Trenton
Box 1000 Stn Forces
Astra, Ontario K0K 3W0
Attn: Major William March

William.March@forces.gc.ca

CALL FOR SUBMISSIONS

For the **Summer 2010** issue: **30 April 2010**
For the **Fall 2010** issue: **30 July 2010**
For the **Winter 2011** issue: **30 October 2010**

DISCLAIMER

IN THIS ISSUE

WINTER 2010 • VOL.3, NO.1

ARTICLES

POINTS OF INTEREST

Photo : Cpl Tom Parker

BOOK REVIEWS

Photo : Cpl Bill Gomm

Photo : MCpl Robert Bottrill

Colonel Christian Drouin on parade during the Joint Task Force Afghanistan Air Wing, Transfer of Command authority ceremony.

Photo: Cpl Owen W. Budge

EDITOR'S MESSAGE

Happy 2010! I trust that everyone had an excellent holiday period and is looking forward to the challenges and opportunities that the New Year will bring in. Operation PODIUM, support to the 2010 Winter Olympics, is well in hand, preparations to support the G-20 summit in Ontario this summer are underway, air operations in Afghanistan are in full swing, operation Hestia has our full attention, and routine work in Canada continues apace; all-in-all, a busy time for the Air Force.

Despite the high level of activity, I do hope that you can spare a few moments to read this issue of the *Journal*. The articles herein look at building an Afghan air force and SOF aviation, ponder the role of the Chief Warrant Officer (CWO) in the modern military, and offer an Australian look at who had the fourth largest air force in World War II. As well, we dug into the pages of the old *Roundel* magazine from RCAF days to discover just what species of bird adorns the Air Operations cap badge — a most apropos subject given our shared dark and light-blue heritage.

Before I leave you to peruse the pages of this issue, I would like to make a quick plea for additional book reviews. There is a wealth of good (and bad) books out there that delve into topics of interest to the Air Force, so when you have finished your latest "read", let us know what you thought about it.

Major William March, CD, MA
Senior Editor

LETTERS TO THE EDITOR

To the Editor:

Hi Sir,

I just finished reading the Summer 2009 edition of the *Air Force Journal*. It was very interesting, particularly the article on the *Gotterdammerung*. I thoroughly enjoy RCAF history and that article was an excellent augmentation item for the Royal Air Force Fighter Command Victories Claims books by John Forman. Well done to Mr. Gilmour for breaking it down for us.

I was very curious as to who chooses the images for the *Air Force Journal*? While I love the product, the images are sometimes quite dull given the hundreds of thousands of images available showing our Air Force in action. The cover, a corporal peeling potatoes (and quite possibly an Army person to boot), really does not represent the "air power" theme of the *Journal*. While an Army may operate on its stomach, we in the Air Force prefer to get there in an aircraft—LOL!

Great journal—I just wish they could put more Air Force-centric images to depict what we do here. All the best in the future and sorry I had to comment on the photo. My fellow airmen here thought it was a bit of a miss. That said, keep up the good work and have a great Air Force day.

Per Ardua Ad Astra.

Captain Fred Paradie, CD

Editor's Response:

Captain Paradie:

Of all the photographs that have been in the various issues, this is the one that has elicited the most comments, many of them echoing yours ... interesting.

With respect to who chooses the pictures, it is normally our production staff (doing the unsung, hard work of putting together the Journal) that selects a number of potential candidates and then I and/or the production manager (Ms. Anne Pennington) provide oversight / final selection as part of the editorial process. I'm afraid that I am the "guilty bastard" who chose the cover picture on that particular issue, but I did it for a specific reason. Often we in the Air Force tend to focus on technology and platforms—perhaps too much. Although this is understandable and desirable, we sometimes tend to, if not overlook the human element, treat it as secondary. Regardless of how fancy the technology gets, there are still elements of basic military culture that will never change: discipline, service before self ... peeling potatoes (or "Kitchen Patrol [KP]" to use the US term). These aspects of military culture have been with us forever. I bet you that I could take that picture back in time 100 or 1000 years and any individual who served in a military formation would have instantly related. So in a very real sense, I wanted to convey in one picture the timeless human element of our profession, regardless of the colour of the uniform or the technology at our disposal. In this case, I picked a young member of a tactical aviation squadron on exercise as a perfect example of what I was trying to put across.

Not to fear though, future issues of the Journal will have as many Air Force-centric pictures as we can manage.

Major William March

To the Editor:

I receive each copy of the *Journal* and read it from front to back. I am most impressed with the depth of the research which apparently goes into many written items. The bibliographies of some are overpowering.

However, many articles fail to reflect the authors' opinions, but rather fall back on somebody else's ideas.

For example, the SOF story ("A Selection Process for Special Operations Forces Aviation in Canada," Journal Vol. 2, no.4) contains much information about why the author believes SOF is important but it did not tell me why the author felt it necessary to repeat what others say. He didn't convince me there is a sound case to support the idea, nor did he explain why indeed there is now a special operations command.

Canadian aircrew have never been found wanting in operations no matter the challenges. Part of the reason, and perhaps the main reason, is the excellence of the basic and operational training they receive.

If I were the pilot of the Huey shown with military personnel hanging on the outside, I'd refuse to fly it except for public relations reasons and never in God's name in a combat situation. These poor slobs would be picked off like ducks in farmers' fields in the Prairie fall.

Operational training is an historic aircrew training and honing process. Special ops training is what it is.

LETTERS TO THE EDITOR

Sorry, but the lack of original thought in many articles in the Journal leaves me disappointed. I get the impression that the Canadian Forces is largely top-heavy in organizational terms, and in its attempts to copy the infinitely bigger US Forces it makes us look silly.

How about some original thought? The description of your "raison d'être" inside the front cover is mind-boggling and must be frightening to many whose job is to fly and fight aeroplanes. No, I'm not old fashioned. Old? Yes, but still able to think and not just parrot what others have said!

Sincerely,

Lieutenant-General Bill Carr (Retired)

Editor's Response:

Sir:

Thank you for taking the time to write—and for your kind words on the quality of the Journal (I wish I could take credit, but the production/editing staff do a remarkable job).

With respect to your main point, I couldn't agree with you more. The purpose of the Journal is to encourage sound, well-researched debate/discussion on aerospace issues and topics. And the cornerstone of such an approach should be "original thought." Unfortunately, that also means that the authors must be willing to, at best, challenge the status quo, at worst, open themselves up to criticism. Although I have found many people who are willing to tell me what is wrong with the Canadian Air Force's approach to doing things and sometimes how it could be done better, most seem categorically unwilling to commit their opinions to paper. I'm not making excuses—it's my job to encourage people to do just that—and I will continue to strive to move the Journal more and more in that direction.

One of the ways in which I am trying to accomplish this is by publishing abridged papers produced by Air Force personnel at Staff College in Toronto. Lieutenant-Colonel Morehen's article on SOF aircrew selection is one of these and, because of the length, I had to publish it in two parts. Of necessity, Part I focused on the existing literature / allied perspectives on SOF aircrew selection. Building upon this basis, Part II will permit LCol Morehen to develop his argument and if not convince readers of the soundness of his thesis, then at least to make them consider the topic. And if he "raises a few hackles" along the way, so much the better.

Cheers,

Bill

To the Editor:

Bill,

I wanted to drop a quick line to tell you how much I enjoy the new *Journal*. The articles have been well researched and well written. Great job to you and your staff.

The one thing I've noticed, and it seems to be a problem throughout the CF, is the misuse of the post-nominal for the Canadian Decoration. The post nominal for the decoration is only CD — as you properly use it — and not CD1 or CD2 to denote the number of bars the individual has. No matter how many years we have served, the post-nominal remains the same; CD.

I've mentioned the same error to our staff with the *Army Journal* as the same error was being printed.

For your consideration.

Cheers

Kent

Major J. Kent Stewart

CO LFDTS HQ | Cmdt QG SDIFT

Editor's Response:

Kent:

Thanks much for the keen observation — every once in a while, one slips through — but I will make sure that I remind the editorial staff (and kick myself for having missed it) about the proper way to list the CD.

Cheers,

Bill

Letters to the editor are welcomed and must include the author's name, rank and position. Include a phone number for verification. We reserve the right to edit while preserving the main objective of the writer. We cannot guarantee that any particular letter will be printed. Mail, e-mail or fax to the *Journal*'s Senior Editor.

For further information please contact the Senior Editor at: William.March@forces.gc.ca

POINTS OF INTEREST

2010 Air Force Historical Workshop

The theme of the 2010 Air Force Historical Workshop is "De-Icing Required: The Historical Dimension of the Canadian Air Force's Experience in the Arctic," Scheduled to be held during the first week of June 2010. The workshop will feature papers from a variety of academic / air force personnel culminating in a panel discussion. Additional information / contact details will be available on the CFAWC website in February 2010.

Projecting Power: Canada's Air Force 2035

The Canadian Forces Aerospace Warfare Centre (CFAWC) has just published *Projecting Power: Canada's Air Force 2035*. The purpose of this document, within the context of the Department of National Defence/Canadian Forces (DND/CF) requirements, is to examine the true security and operating environments as well as their implications for the application of aerospace power. Specifically, it offers a detailed first look at how the Canadian Air Force may be conducting missions a generation from today as well as what capability requirements will be needed to operate within this environment. It is available electronically at http://trenton.mil.ca/lodger/cfawc/index_e.asp or hard copies may be requested from Anne.Pennington@forces.gc.ca.

Canadian Aerospace Power Studies, Vol. 1, Historical Aspects of Air Force Leadership

The Canadian Forces Aerospace Warfare Centre (CFAWC) has published the first volume of the "Sic Itur Ad Astra" series focusing on Canadian aerospace power studies. The purpose of the series is to examine aerospace issues of interest to the Air Force from a broad perspective (past, present and future) and to encourage the academic study of aerospace subjects. The first volume, entitled *Historical Aspects of Air Force Leadership,* contains the proceedings of the 2008 Air Force Historical Workshop held in Ottawa. It is available electronically at http://trenton.mil.ca/lodger/CFAWC/eLibrary/Publications_e.asp or hard copies may be requested from Anne.Pennington@forces.gc.ca

BUILDING AIR POWER FOR AFGHANISTAN: A TEAM EFFORT

Photo: Thomas L. Dow, Technical Sergeant, USAF

BY **BRIGADIER GENERAL MICHAEL R. BOERA**, UNITED STATES AIR FORCE

COMMANDING GENERAL, COMBINED AIR POWER TRANSITION FORCE
COMMANDER, 438TH AIR EXPEDITIONARY WING

Editor's Note: *In editing this article, the author's American spelling and idiomatic conventions have been maintained.*

Introduction

As a fellow author noted recently in these pages, air forces do not embrace formal doctrine with the same enthusiasm armies do.[1] Because early air power theorists' bold written claims were subjected to relentless second-guessing and debunking by waves of future scholars, today's ideas often circulate through discussion rather than publication. Cutting-edge aerial tactics undergo a thorough peer review on bar napkins and briefing room white boards long before they ever appear in official publications, and similar habits endure in the area of doctrine. Though few air force officers may commit their doctrinal ideas to publication and academic scrutiny, the application of sound thinking informed by historical analysis and current knowledge is an obligation shared by all leaders who lead coalition air forces. This requirement appears in sharp relief in Afghanistan, where the coalition working to strengthen Afghan security forces makes the restoration of "strong, capable, and sustainable" air power a cornerstone of its effort.[2]

The North Atlantic Treaty Organization (NATO) organization charged with helping the government of Afghanistan expand and refine its air power capabilities is the Combined Air Power Transition Force (CAPTF). As the commander of CAPTF, I am fortunate to have a wealth of ideas to draw on to refine my "white board" picture of how best to increase the air power capacity of a nation struggling to regain stability in the face of a dedicated insurgency. CAPTF's strengths lie in our blend of coalition experience, our application of lessons learned from the study of previous counterinsurgency air power efforts, and our close integration with organizations working to improve Afghanistan's national security forces. In this article, I will outline each of these sources of strength, highlighting the growing opportunities for increased coalition participation in CAPTF. Next, I will provide an overview of CAPTF's current and planned efforts to grow the Afghanistan National Army Air Corps (ANAAC) and the other air power organizations that contribute to Afghanistan's internal security. My goals are to provide a glimpse of the promising development of Afghan air power and to attract the attention of other nations who can make important contributions to this team effort.

Coalition Expertise

CAPTF's first source of strength comes from its diversity of air power expertise. The "Combined" aspect of CAPTF is evident throughout the organization, starting at the top. CAPTF's new deputy commander is Colonel Michael R. Dabros of the Canadian Air Force. With a background flying helicopters for the Canadian Forces, Colonel Dabros understands the tactical realities of flying in Afghanistan, whose mountainous terrain, limited road network, and chronic improvised explosive device threat make rotary-wing airlift an essential military requirement. As a former commander of an air wing that flew medium- to heavy-lift helicopters, supported domestic relief missions, operated unmanned aerial vehicles, and trained new pilots, he brings an understanding of all the major operational aviation challenges facing Afghanistan.[3] And as a recent commander of the Canadian Forces Aerospace Warfare Centre, he has the ideal credentials to be a catalyst and steward of air power development in Afghanistan's ever-changing strategic environment.

In addition to its leadership, CAPTF's reliance on coalition partners is on view in our Operational Mentor and Liaison Team (OMLT) working with Afghanistan's Mi-35 rotary-wing gunship platform. The OMLT is staffed by mentors from the Czech Republic, who conduct gunnery training missions in a fleet of refurbished and donated Mi-35s. Like all CAPTF mentors, the training they provide proceeds beyond ground school. Mentors participate directly in missions with Afghan aircrews flying Afghan aircraft.[4] The training builds skills that ANAAC attack helicopter crews will employ in Afghanistan's growing inventory of gun and rocket pod-equipped Mi-17s. These pilots are an integral part of the rotary-wing close air support (CAS) program that the ANAAC is developing with CAPTF's assistance.

Though most of CAPTF's current membership consists of United States (US) military personnel, the opportunity and need for coalition partnership continues to grow. The NATO strategy for stabilizing Afghanistan centers on increasing the size and capabilities of Afghanistan's army and national police. Air power provides capabilities that enable all of Afghanistan's security forces to operate with greater efficiency. For this reason, the ANAAC will see a commensurate increase in size, and the capabilities of all nations will be called upon to help facilitate this growth. NATO has asked its members to provide subject matter experts for 17- to 19-person teams at airfields around Afghanistan. Teams will mentor Afghan aviation units in all activities related to aircraft operations, maintenance, security, and logistics support. Each will help the ANAAC develop expertise in operating its Mi-17 platforms.

More room for coalition participation exists in the establishment of an air training base at Shindand in western Afghanistan's Herat province. A 19-person team, capturing expertise in every area of modern airbase operations, will enable Afghanistan to backstop fixed-wing operations at a newly established indigenous military flight training facility. This is a significant step in enabling Afghanistan to provide its own aviation security forces, as ANAAC pilots now receive training outside of Afghanistan. The ANAAC recruiting slogan, which translates from Dari as "Be an Eagle for Afghanistan," will become more effective when the Shindand training center becomes operational. Today's talented Afghan youth who want to make a difference for their country will be encouraged to join a self-sustaining air service capable of providing basic and advanced aviation training. As coalition partners, we have the opportunity to make this a reality in the next few years.

Mentors from many nations who form a team to build Afghanistan's air power capability fill an urgent need for expert personnel, but also increase the chances for success in building effective Afghan security forces. I will highlight the reasons for my optimism on this point in describing academic and historical studies that inform CAPTF's approach in assisting the ANAAC.

Academic and Historical Underpinnings of CAPTF's Approach

The fundamental strategic issue which CAPTF helps the ANAAC explore is one of air power's contributions to Afghanistan. Objective perspectives of what air power delivers in a counter-insurgency (COIN) fight are difficult to find in the US armed forces—most informed military leaders approach the topic with an ideological slant. US Army General Stanley McChrystal, the NATO International Security Assistance Force (ISAF) commander, recently said, "Air power contains the seeds of our own destruction."[5] His comments, following a coalition missile attack on a residential compound, were appropriate for the context in which he made them. Because air strikes can kill innocent civilians as well as enemy combatants, the kinetic effects of air power sometimes aid the efforts of the insurgency they are intended to defeat. Air power can do more than kinetic strike, though. Coalition partners are often the first to raise this point in doctrinal discussions.

Doubtless, General McChrystal was thinking of other air power applications in looking forward to when "the brave and skilled pilots of the Air Corps gain the ability to conduct many of the same airlift missions done by coalition forces in defense of their country."[6] In this case, he was speaking at a dedication ceremony for the first C-27s delivered to the ANAAC. He went on to list tracking Taliban forces, moving soldiers, delivering supplies, and evacuating wounded soldiers as essential missions that the C-27 will accomplish. General McChrystal's comments imply that support aviation roles are often the most important part that air power can play in COIN warfare, the same conclusion scholars James Corum and Wray Johnson draw in their book *Airpower in Small Wars*.[7]

Figure 1: Afghanistan's Minister of Defense Abdul Rahim Wardak and NATO ISAF Commander General Stanley McChrystal speak at a dedication ceremony for Afghanistan's C-27 aircraft on 15 November 2009

Consistent with this conclusion, CAPTF's present efforts are almost entirely focused on providing support capabilities via fixed- and rotary-wing platforms. A moment of map study reveals that Afghan population centers are isolated from each other by tall mountains and harsh deserts and that airlift is one of the smartest areas on which to concentrate. In addition to battlefield mobility and military resupply, air power provides mobility to Afghan citizens, filling logistical gaps that the budding commercial market struggles to meet. To a nation, all of CAPTF's current and potential coalition participants have appreciated and employed these applications of air power in their own domestic and regional military air operations. As a U.S. Air Force officer, I appreciate this breadth of expertise. I would love to see more of it come to Afghanistan in the form of aviation OMLTs from a range of NATO troop-contributing nations, including Canada.

Incorporating many nations into a cooperative approach to air power development adds strategic weight to efforts in Afghanistan. The effort to rebuild Afghanistan is fundamentally international, resting on pillars of governance, security, and socio-economic development.[8] The ANAAC is an essential part of the Afghanistan National Army (ANA), and will play a pivotal role in Afghanistan's fight to provide security for its citizens. Without a broad base of participation, however, grand words on paper can ring hollow. International agreements identify the United States as the lead nation for instituting security forces reform.[9] If this lead designation couples with perceptions that just a few nations participate in the effort with any meaningful contribution, security force development risks becoming viewed in the international community as a US-only project, robbing the coalition of legitimacy.[10]

In contrast, historical scholarship teaches that an effective COIN strategy must be comprehensive—it should allocate diplomatic, political, military, and economic resources to achieve a political goal.[11] CAPTF is positioned for success in that respect, because it touches every element of a linked grand strategy.

Our mentoring relationships with Afghanistan's government and military leaders give insight into political and social challenges here. We channel resources from the international community to increase military capability, and have a hand in ensuring good stewardship of those resources. Any resulting increase in military capability bolsters the legitimacy of the Afghan government by enabling it to provide better security for the population. Thus, the building of Afghan air power capacity that CAPTF facilitates reaches across all strategic areas and furthers the political goal at the heart of COIN success. Increased direct participation in CAPTF by more countries will strengthen Afghan legitimacy even as it provides a means for those countries to claim a direct contribution to developing Afghanistan's security forces. National provision of a discrete capability is an excellent way to contribute. A much-needed example is provision of a complete air base services mentorship team such as the one required at the Shindand training center. Countries could also help by partnering with other NATO nations to fill similar mentorship requirements in a cooperative effort.

Moving beyond the realm of international relations, CAPTF also borrows from geopolitical theory in shaping its mission. Afghanistan's land-locked position in Southwest Asia and its isolated geographic regions make it a "natural" air power.[12] The harsh terrain and ground-based threats discussed earlier in this article hinder efforts to rebuild infrastructure. Our NATO partners have realized that tactical airlift and helicopters are necessary to support the provincial reconstruction teams that do most of the infrastructure rebuilding in Afghanistan.[13] CAPTF has increased Afghanistan elected leaders' access to tactical airlift, affording these officials an opportunity to forge meaningful cooperation and trust in the federal government throughout the country's disparate regions. Afghanistan is a natural air power, because it cannot function as a modern state without mobility that air power alone can provide.

Another lesson CAPTF takes to heart is that "aerial campaigns that target insurgents and terrorists located in or very near population centers are generally counterproductive."[14] They are doubly so when the enemy's most effective information operations tactic is to draw attention to the national government's reliance on "occupiers and infidels."[15] Even with NATO's so-called "surgical strike" capability, the best-intentioned ground commanders have exhibited an ability to anger civilian populations and give insurgents public relations victories. A recent example of this conundrum happened in northern Afghanistan's Kunduz province. When Taliban insurgents hijacked two petroleum tanker trucks, a ground commander's call for airstrikes to protect a nearby base led to allegations that NATO air power had caused widespread civilian casualties.[16] A solution to this problem is to provide Afghanistan with an organic air power capability. The ANAAC will be able to deliver its own Afghan soldiers to the fight, which will reduce demand for air strikes conducted by outside air forces. In turn, this reduces insurgents' ability to claim that the government is a puppet of the West even as the ANA undermines the ability of the Taliban, al-Qaeda, and other groups to conduct attacks.

Even with excellent battlefield mobility, the kinetic strike capability provided by air power retains a role in battling insurgency. In the Afghan COIN arena, however, the politics of the struggle make an indigenous capability more valuable than the capabilities of any outside nation. On this front, the ANAAC is working to train forward observers who, from positions on the ground, can clear and coordinate airborne fires. They will first act as observers for the Mi–35 attack helicopter crews trained by the Czech aviation OMLT, directing live fire missions on ranges around Afghanistan. CAPTF assists with the challenges of instituting close coordination procedures for the Afghan battlefield, including fixed-wing attack platforms. Most NATO nations possess CAS integration expertise, and CAPTF welcomes their participation. For the same reason that indigenous security forces are better than foreign troops, an ANAAC enabled to conduct its own COIN battles from the air will bring stability of a kind that does not come with outside military involvement.

Figure 2: Mi-35 on a live-fire training mission near Kabul

CAPTF has a unique perspective to observe another academic lesson gleaned from previous COIN efforts: a low-tech approach to airpower can have dramatic positive effects.[17] Western air forces favor high-tech military solutions, but this approach will not work in Afghanistan. As the school-building mountaineer Greg Mortenson learned in his personal efforts to advance peace, the patience of Afghan culture is staggering by US standards. Sometimes one must "listen to the mountains," and accept that modest capability built with patience is the most effective way to leave Afghanistan with enduring air power capability.[18]

Some of our coalition partners distinguish their cultures against stereotypical US impatience—CAPTF can benefit from these perspectives, and can also use their expertise in operating ANAAC airframes. Current operations and training use airframes familiar and well suited to Afghanistan, and many of these are familiar to our NATO allies. The current Afghan inventory includes Mi-17 and Mi-35 helicopters, along with the fixed-wing An-32 airlifter. The first two C–27s, flown direct from their refurbishment in Italy, officially joined the air fleet on 15 November 2009. The C-27 will become the backbone of Afghanistan's airlift capability. It offers increased airlift, battlefield mobility, and instrument flight capabilities, but is similar to the An-32 in its simplicity and ruggedness, and our Afghan partners are comfortable operating it. In building up capability to employ these airframes, CAPTF and the ANAAC are pursuing ends that will be sustainable after outside advisors depart, a mission that any coalition country can support with pride.[19]

Figure 3: Afghanistan's first two C-27s taxi at Kabul International Airport

To round out a discussion of the academic and historical lessons that inform CAPTF's approach in Afghanistan, it is evident that air power "provides the flexibility and initiative" that insurgents normally enjoy in the COIN battle.[20] While the need for ground troop involvement in COIN will never go away, certain functions of air power—airlift, battlefield mobility, and light attack—are force multipliers in that fight. With responsive air power, force requirements for 20 to 25 soldiers for every 1,000 indigenous residents, the gold standard for COIN, may shrink, allowing smaller forces to conduct effective operations against insurgents.[21] The development of effective air power alongside ground troops ensures that they will have an effect greater than the measure of their numbers.

Integration of Afghanistan's National Security Forces

An academic lesson that lends itself to a discussion of CAPTF's final source of strength is the idea that "joint operations are essential for the effective use of air power."[22] CAPTF's position within NATO's training and mentoring effort allows us to grow an ANAAC that is complementary to the larger ANA it supports. Because CAPTF has roles that support both the NATO Training Mission – Afghanistan (NTM-A) and the Combined Security Transition Command – Afghanistan (CSTC-A) we work closely with mentors and trainers who influence all of Afghanistan's security forces. This helps Afghanistan forge an air force capable of independent action, but also ensures growth commensurate with the army it supports.

The greatest challenge in creating a flexible, strategically and tactically capable air force is the issue of command and control (C2). As I describe later, the overarching theme of CAPTF's effort to build the ANAAC follows a theme of shaping institutional processes and organizational culture. Growing future C2 capabilities in the ANAAC is critical. It is just as important that organizations coordinating the efforts of NATO air assets today create space for our Afghan counterparts to plug into the coordination system. Afghanistan's air assets, though limited right now, should become a larger part of the overall air security picture for Afghanistan. This is the same model followed by the other NTM-A and CSTC-A organizations developing Afghan security forces. Therefore, we must make C2 structures appropriate for Afghanistan and sustainable by the Afghans, as they will inherit sole responsibility for any devised structure when the coalition departs. It does us no good to develop a C2 structure they cannot, or will not, sustain themselves.

Fortunately, the odds of setting up the appropriate relationships that are the foundation of effective C2 are increased by CAPTF's geographic location at the Kabul International Airport (KAIA). This is because the ANAAC's Air Corps Command Center (ACCC) and the ISAF Joint Command's (IJC) Joint Operations Center (JOC) are also located at KAIA. IJC oversees all of NATO's daily operations in Afghanistan, including air operations. The ACCC is growing a C2 capability for Afghan air assets. Having both organizations collocated at KAIA means that Afghan representatives will soon have a seat on the JOC floor, engaging NATO air support for Afghan operations and in turn providing air support to NATO operations.

There is another benefit of the ANAAC being at KAIA. It relates to a C2 lesson that a recent study of the US Air Force's experience in Operation Enduring Freedom revealed. Briefly, this is the danger that beneficial "reach back" can devolve into harmful "reach forward," a tendency of communications-enabled headquarters to meddle in what should be decentralized execution of air operations.[23] Afghanistan already has an operational culture that does not empower operators—a tendency for "reach forward" is strong. Power is tightly controlled at the top, often through "cell phone C2," a practice where commanders make last-minute decisions about air allocation and apportionment without regard to a bigger operational picture. Though this kind of C2 works passably for a tiny fleet of aircraft, it will break down as the ANAAC increases in size over the next few years. Having a chance to demonstrate to our Afghan counterparts how an effective command center permits centralized control but allows decentralized execution of air power might be the most effective way to aid them in the development of their own C2 processes.

The effort to develop effective C2 is another reason for broader coalition involvement in CAPTF. A wide variety of nations fill roles on the JOC floor—I sit down with representatives from no less than 36 nations at each meal in the dining facilities at KAIA. The most effective way to overcome language barriers and organizational friction is to have people working together who are from the same nation's military and speak the same language. A more diverse coalition representation on CAPTF would take best advantage of the ANAAC headquarters, the ACCC, and the IJC JOC being on the same real estate in Afghanistan.

Having set forth the coalition cooperation, academic historical lessons, and C2 relationships that empower CAPTF to develop air power in Afghanistan, I'd like to outline the current activities in which we are collaborating with the ANAAC.

Current Air Power Development

By training, assisting, and mentoring the ANAAC, CAPTF seeks to create sustainable capacity in four areas. Our efforts (1) build the supply of aircraft, (2) create a trained, motivated, and talented group of airmen, (3) build and improve airfields and infrastructure throughout Afghanistan, and (4) support ongoing operations critical to Afghanistan's survival as a nation. An ongoing effort transcends these four focus areas. In building the tangible capacity of the ANAAC, we seek to embed improved institutional processes, C2 functions, and a culture of training throughout the ANAAC, interweaving them into Afghan military culture across the four mission areas upon which we focus. I will briefly describe our activities in each of these areas.

As the academic evidence suggests, airlift capabilities have dominated the ANAAC's aircraft built thus far. Afghanistan's terrain and the need to support ground forces engaged in a COIN fight justify this concentration. The current workhorses of the ANAAC fleet are the Mi-17 and An-32. The Mi-17 is a utility helicopter ideally suited to high-altitude operations in Afghanistan's mountainous terrain, and the An-32 is a fixed-wing airlifter capable of short-field takeoffs and landings on unimproved surfaces. Daily operations for these aircraft include personnel movement, medical transport, and cargo delivery. Some capabilities we tend to take for granted in the West have recently sprung to life in the ANAAC, and will become a bedrock foundation for the further development of a professional Afghan military. Allow me to relate an example.

In late September 2009, two ANA soldiers wounded in the Kandahar province arrived in

Figure 4: Mi-17 delivers Afghanistan National Army troops to the battlefield

Kabul on an An-32. ANAAC flight medics transferred the soldiers to National Military Hospital medics on the ramp at Kabul, and helped load the patients onto an Mi-17 configured with litters for medical evacuation (MEDEVAC). The soldiers arrived at the National Military Hospital, their care uninterrupted and provided completely by Afghan aircrews and medical personnel.[24] The ability to provide care of this quality to its soldiers builds confidence and trust among the ANA. Our continued mentoring and investment in capabilities like this will enable Afghan security forces to recruit and retain the best and brightest of Afghanistan's rising generation, and prevent recruitment by insurgent organizations.

The most important activity in CAPTF and the ANAAC right now with regard to increased airlift capability is the delivery of refurbished C-27 aircraft. With delivery of the first two aircraft in November 2009, the ANAAC gained a pallet and roller cargo system, airdrop system, and dedicated medical evacuation capability to complement the existing fleet of short- and unimproved-field aircraft in the inventory. The C-27 will replace the An-32, forming the core of Afghanistan's fixed-wing airlift fleet. The twin-engine turboprop can carry up to 44 passengers, more than 23,000 pounds of cargo and fuel, and can land on unimproved fields as short as 3,000 feet. CSTC-A has financed the refurbishment of eight aircraft to be delivered through fiscal 2010, with 18 aircraft planned for delivery by 2011.[25]

Figure 5: C-27s in formation over Afghanistan

The development of the rotary-wing fleet is also dynamic. The Mi-17 fleet grows monthly, and Mi-35 attack helicopters have conducted successful live fire training missions at ranges throughout Afghanistan. The Mi-17 fleet is critical to battlefield mobility and medical transport missions, and is a reliable mode of transport for government officials. The fleet is slated to double in size by 2013. The Mi-17 was specifically designed for use in Afghanistan. Its reliability, high-altitude capability, interoperability with neighboring nations, low cost, ready availability of maintenance assets, and familiarity to experienced Afghan Mi-17 maintainers and aircrew combine to make the Mi-17 the right helicopter for Afghanistan.[26] Building a robust rotary-wing fleet for Afghanistan is a path to sustainable ANAAC capability, because helicopters will always be essential for movement in the nation's rugged terrain.

Providing aircraft is not enough. An effective force requires skilled and motivated airmen. This is the most difficult and rewarding effort in which CAPTF engages, and it will have the most enduring impact. Efforts span all levels of the ANAAC organization, with Afghans and embedded NATO partners collaborating on everything from C2 decision-making processes to the best way to load cargo on a C-27. CAPTF's mentors offer advice adapted to the Afghan way of doing business while focusing on professionalism and mission accomplishment. We never accept compromise when it comes to flight safety. The more coalition partners become involved with this mission, the easier it will be to show the ANAAC that these values are common among airmen in the world's modern, successful air forces.

For any function you can name at an air base, there are subject matter experts in Afghanistan providing training, advice, and mentoring. From civil engineer functions to airfield management, CAPTF works with Afghans to share experiences and develop best practices for Afghan air power. The first Afghan loadmaster class in over 30 years finished a three-month course of training in July 2009, certifying eight Basic Loadmasters and preparing them for transition to the C-27.[27] Intensive English language training allows aircrew and other Afghans who must function in the international flight system to perform there with safety and competence. Our mentors and instructors come from all military branches and also include civilian contractors.

Facilities, CAPTF's third focus area, complement the aircraft buildup and training of ANAAC personnel. Trained aircrew, support personnel, and aircraft are effective only with a robust airfield structure. The largest amount of development has happened in Kabul, but as the Kabul Air Wing becomes more self-sufficient, the need for mentors will grow at Kandahar, Herat, Shindand, Mazar-e-Sharif, Gardez, and Jalalabad—sites that will all benefit from construction facilitated by CAPTF. The latest example of progress on this front occurred on 5 October 2009, when the Kandahar Air Wing celebrated its official establishment. Affiliated with the ANA's 205th Corps, Kandahar is the second wing established in the nation since 2001.

Operations constitute CAPTF's fourth and final area of mission concentration. Flight operations have never stopped for war; the expression "building the airplane while flying it" is an apt description of the CAPTF and ANAAC team effort. Our desire to increase training and institute new means of C2 are in constant tension with a limited fleet of aircraft,

a never-ending list of urgent missions, and a combat operations tempo that can never stand down for a "reset."

Besides everyday combat and other military operations, flights to which CAPTF devoted attention recently included support of national elections, the annual Muslim Hajj to Mecca, and increased levels of flight training, particularly for the Mi-17. The support the ANAAC gave to the main 2009 Afghan election was superb, and its assets were retained without hesitation to support a planned run-off election. Though Abdullah Abdullah's late withdrawal caused cancellation of a second election, Afghan Mi-17s diligently carried balloting materials around the country to be ready for a second round. The ANAAC provides airlift for Muslim pilgrims in remote areas to regional air transport hubs in Afghanistan. Because of the cultural importance of the Hajj, this support makes the ANAAC a valued institution in the eyes of all Afghans. In 2009, the Hajj started in late November, the winter weather putting extra strain on a difficult logistical undertaking.

Figure 6: An Afghan Mi-17 loaded to capacity with election materials

Although flight training is a normal sustainment function of any air force, the unique demands on the ANAAC make training a difficult proposition. Because many of the regular pilots in the ANAAC have years of flight experience, training sometimes enjoys less priority than the urgent operational missions demanded by Afghanistan's current COIN struggle. By increasing aircraft inventory, increasing numbers of pilots, and establishing training centers in Afghanistan, CAPTF is helping the ANAAC to build a culture of training that prioritizes regular proficiency requirements as an integral part of safe and effective military flight operations.

It is evident that much is taking place right now in Afghanistan to advance development of air power capability. Each program reveals several places where more resources and capabilities would fill a need, and offers numerous chances for more coalition partners to become involved. The final section of this article looks ahead to the future of CAPTF and the ANAAC.

Planning for the Future

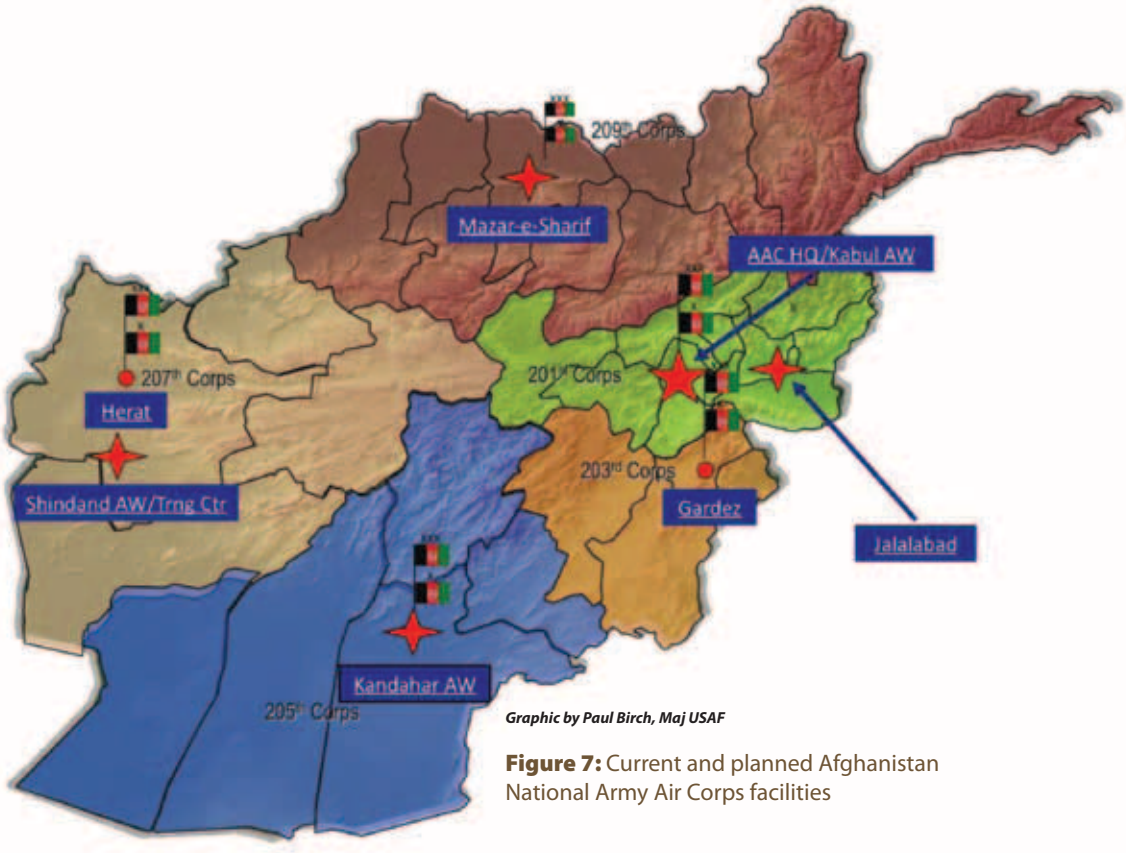
Moving forward, I want to emphasize the absolute necessity for CAPTF's plans to embrace those of Afghanistan's military and political leaders. We must not *impose* an air corps on Afghanistan patterned after the habits of NATO's modern air forces. We have made progress in convincing Afghan leaders that an empowered, centrally commanded organization is an effective way to control air power, but an existing culture of close control by senior leaders over all decisions means that change will come slowly at best. US Airmen restructure our own organizations at a frenetic pace. This habit is anathema to Afghan culture, and attempts to restructure the ANAAC in such a way would be unsustainable. With those caveats in mind, there are several promising ANAAC developments just over the horizon.

In the area of aircraft procurement, the ANAAC will continue to grow its Mi-17 and C-27 fleets. We are also assessing additional rotary- and fixed-wing trainer, utility, and light attack aircraft. The number of trained operators and support personnel in the ANAAC will grow to complement the additional airframes. Current plans envision increasing the overall fleet size from 45 to 154 aircraft while growing the number of personnel from the current 2,700 airmen to over 8,000 by 2016.[28] Growth planned for other Afghan security forces may make these totals even higher.

Plans to increase the aviation infrastructure throughout Afghanistan are likewise ambitious. The recent establishment of the Kandahar Air Wing is a good omen for future development of flying units around the country. By 2016, Afghanistan should take pride in permanent ANAAC detachments at Mazar-e-Sharif, Jalalabad, Gardez, and Herat. These will function, along with the air wing and training center at Shindand and the existing air wings at Kabul and Kandahar, as the backbone of an ANAAC that will have capability on call in every region of the country.

Viewing today's plans for ANAAC growth, it is difficult to overstate the importance of patience. As two Afghanistan COIN experts put it, "The hosts doing something tolerably is often better than foreigners doing it well."[29] Our zeal to help Afghanistan develop its capability for air power must never outstrip the ability of our hosts' learning to do things for themselves. A failure to appreciate this constraint turns our "help" into an obstacle, and means that blood and treasure will have been spent in vain. On the other hand, patience that leads to new capabilities internalized by the next generation of Afghan air power operators and leaders will be the kind of investment that leads to victory in this complex theater of war.

Along with patience, understanding the realm of the possible is another essential art for the COIN warrior in Afghanistan. Recalling the earlier discussion of academic principles that motivate CAPTF's efforts in Afghanistan, readers may wonder where an acknowledgment that "small wars are intelligence intensive" fits in a strategy for Afghanistan.[30] The COIN fight here is certainly intelligence-intensive, and the



Graphic by Paul Birch, Maj USAF

Figure 7: Current and planned Afghanistan National Army Air Corps facilities

Afghan military excels at its collection and exploitation of human intelligence. Fused with the capabilities of high-tech airborne intelligence, surveillance, and reconnaissance (ISR) platforms available to coalition partners, the collective ISR effort in Afghanistan has yielded hundreds of successful operations.

Despite this synergy, rushing to give Afghanistan a computer-based, high-tech intelligence infrastructure of the kind used by industrial nations would be misplaced right now. Afghanistan needs more time to build a pool of technology-savvy recruits able to fill potential billets. More importantly, the whole Afghan military needs to internalize institutional processes that would make a technologically enabled intelligence system worth its cost. To repeat a theme, rushing ISR in the mold of NATO's modern militaries on Afghanistan now would do more to dismantle an excellent existing human intelligence capability than to build a viable new system.

Conclusion

I will conclude with two final historical lessons about COIN warfare. The first teaches: "Small wars are long wars."[31] Our strategy must acknowledge a chance that insurgency and civil war in Afghanistan may outlast the staying power of Western governments. The second lesson teaches: "Some of the best weapons do not shoot."[32] The two observations together suggest that the best investments we can make in Afghanistan are those that allow its people to provide security and good governance themselves after outside involvement runs its course. Developing security capabilities *within* Afghanistan rather than attempting to wear down a determined insurgency from without

is a kind of domestic development, and enables more visible measures like electricity, water, jobs, and education. If CAPTF can contribute to this goal while increasing broader direct coalition participation, we can combat Afghanistan's internal threat even as we revive the strength and legitimacy of the assisting external coalition.

NATO's involvement answers a challenge to "solidify victory within a chaotic political environment" by helping Afghanistan "get back on its feet."[33] Having set out CAPTF's effort to build Afghan air power on the "white board" of *The Canadian Air Force Journal*, I welcome candid feedback about how we can do better. By pointing out opportunities to share aviation expertise with Afghanistan, I look forward to welcoming more nations into CAPTF's essential mission. Mentoring Afghan airmen is a textbook effort in building capacity for a partner nation. The new capabilities being instilled in the ANAAC will forge demonstrable, sustainable advances in capabilities and capacity for Afghanistan's security forces. This outcome is a victory for all of humanity. We are excited to be at the heart of it in CAPTF, and look forward to working with more of the world's air forces in achieving the goal. ■

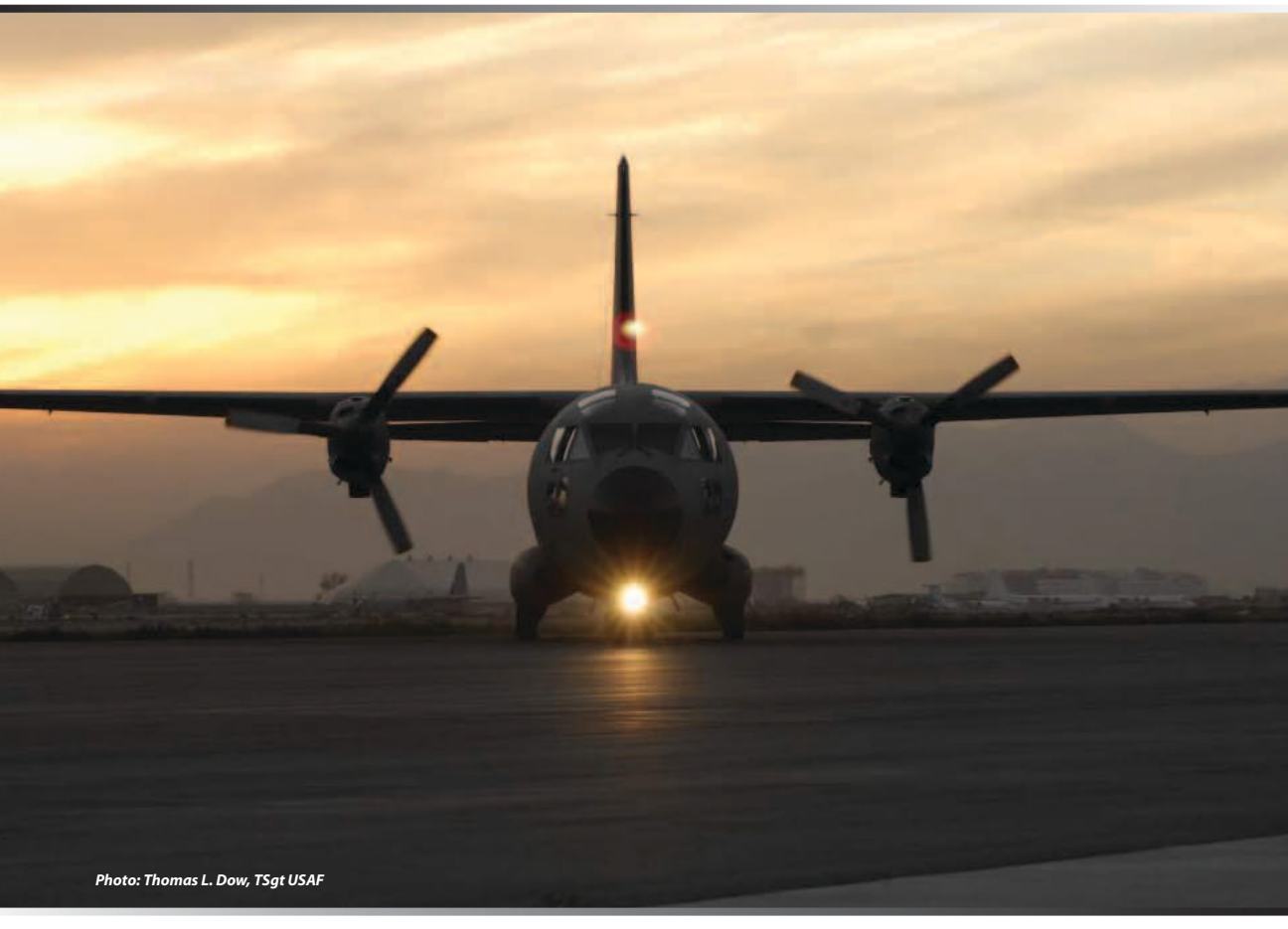


Photo: Thomas L. Dow, TSgt USAF

Figure 8: A C-27 on the Afghanistan National Army Air Corps ramp, Kabul International Airport

Brigadier General Michael R. Boera is the Commanding General, Combined Air Power Transition Force, Combined Security Transition Command-Afghanistan, Kabul, Afghanistan. He leads a joint organization to mentor, train, and assist the Afghan National Army Air Corps. He conducts strategic level coordination with US Central Command and the Afghan ministries of Defense, Interior and Transportation to develop airlift, attack, command and control, and reconnaissance capabilities of the Afghan Air Corps.

List of Abbreviations

ACCC	Air Corps Command Center	ISAF	International Security Assistance Force
ANA	Afghanistan National Army	ISR	Intelligence, Surveillance, and Reconnaissance
ANAAC	Afghanistan National Army Air Corps	JOC	Joint Operations Center
C2	Command and Control	KAIA	Kabul International Airport
CAPTF	Combined Air Power Transition Force	MEDEVAC	Medical Evacuation
CAS	Close Air Support	NATO	North Atlantic Treaty Organization
COIN	Counter-Insurgency	NTM-A	NATO Training Mission – Afghanistan
CSTC-A	Combined Security Transition Command – Afghanistan	OMLT	Operational Mentor and Liaison Team
IJC	ISAF Joint Command	US	United States

Notes

1. Aaron P. Jackson, "The Emergence of a 'Doctrinal Culture' within the Canadian Air Force: Where It Came From, Where It's at and Where to from Here?" *The Canadian Air Force Journal* 2, no. 3 (Summer 2009): 39.

2. Michael R. Boera, USAF, "Afghan National Army Air Corps (ANAAC); Pre-Decisional Draft Briefing," (Kabul: CAPTF, 2009).

3. Rae Joseph, CF, "A Future of Promise for 1 Wing," *The Maple Leaf*, 24 January 2007, 11.

4. National caveats limit the participation of Czech Republic mentors to training missions only. Mentors from other nations participate regularly in operational missions, both on behalf of the ANAAC (military airlift and battlefield mobility) and the Ministry of the Interior (counter-narcotics).

5. Dexter Fillkins, "Stanley McChrystal's Long War", *The New York Times Magazine*, 18 October 2009.'

6. Stanley McChrystal, USA, "ANAAC C-27 Dedication Ceremony." Public address, 15 November 2009.

7. James S. Corum and Wray R. Johnson, *Airpower in Small Wars: Fighting Insurgents and Terrorists*, ed. Theodore A. Wilson, Modern War Studies (Lawrence, KS: University Press of Kansas, 2003), 427.

8. "Afghanistan National Development Strategy," (ANDS) (Kabul: Government of the Islamic Republic of Afghanistan, 21 April 2008), i. The ANDS serves as Afghanistan's Poverty Reduction Strategy (PRS) in accordance with its World Bank Country Assistance Strategy. See also "Bank Publication 2.11 – Country Assistance Strategies," (Washington, DC: The World Bank, June 2005).

9. The most important of these is "The Agreement on Provisional Arrangements in Afghanistan Pending the Re-Establishment of Permanent Government Institutions: The Bonn Agreement," The Afghanistan Bonn Agreement (Bonn, Germany: United Nations, 5 December 2001). "Security Forces" refers to both the military (MoD) and the police (MoI) in Afghanistan. The United States is formally the lead nation for military reform per an Afghan Security Assistance Meeting in Geneva on 17 May 2002, but it also undertakes a substantial police reform effort alongside the European Union's Police Mission for Afghanistan (EUPOL).

10. For a discussion of waning coalition legitimacy caused by pull-out or non-participation in Afghanistan by NATO nations, see Ed Blanche, "Crumbling Coalitions," *Middle East*, no. 390 (June 2008). On the damage caused by unequal perceptions of effort in the Afghanistan coalition, see "Where the Sniping Has to Stop: Afghanistan and NATO." *The Economist*, 7 February 2008, 1.

11. Corum and Johnson, *Airpower in Small Wars*, 425-26.

12. Colin Gray called the United States a "natural air power." Many of the geostrategic factors that underpin Gray's claim about the US predilection for air power also apply to Afghanistan. Among these are Afghanistan's continental geography, its geopolitical isolation, and its lack of sea power. The technological base and nuclear deterrent capability attributed in Gray's US list obviously do not today apply to Afghanistan. See Colin S. Gray, *Explorations in Strategy* (Westport, CT: Praeger, 1996), 85.

13. Andy Nativi, "Afghan Airpower," *Aviation Week & Space Technology*, 26 January 2004.

14. Corum and Johnson, *Airpower in Small Wars*, 428.

15. "From Insurgency to Insurrection," *The Economist*, 22 August 2009, 22.

16. Nicholas Kulish and Judy Dempsey, "Germany Defends Decision on Afghan Airstrike," *The New York Times*, 8 September 2009, A4.

17. Corum and Johnson, *Airpower in Small Wars*, 430.

18. Greg Mortenson and David Oliver Relin, *Three Cups of Tea: One Man's Mission to Fight Terrorism and Build Nations—One School at a Time*, 2007 paperback ed. (New York: Penguin Books, 2006), 149.

19. Histories of the Afghan Air Corps report that "the helicopter [was] the single most important weapon in the Soviet-Afghanistan war," and reveal that An-32s and An-26s have been closely intertwined in the struggle to carve order out of chaos within the government and military leadership since the fall of the Taliban. See "A Short History of the Afghan Air Force, 1919–2009 (Unpublished Draft)," (Maxwell AFB, AL: Air Force Historical Research Agency, 2009).

20. Corum and Johnson, *Airpower in Small Wars*, 434.

21. Other force structuring ratios put the ideal number as 10 soldiers for each insurgent. Since the insurgent population in Afghanistan is unknown, the population-based ratio makes better sense. See Nathaniel C. Fick and John A. Nagl, "Counterinsurgency Field Manual: Afghanistan Edition," *Foreign Policy*, no. 170 (Jan/Feb 2009): 46.

22. Corum and Johnson, *Airpower in Small Wars*, 433.

23. Benjamin S. Lambeth, *Air Power Against Terror: America's Conduct of Operation Enduring Freedom* (Santa Monica, CA: RAND Corporation, 2005), 348.

24. Misti Adams, TSgt USAF, "Account of ANAAC Medics' First Patient Trans-Load." Personal Interview, 12 October 2009.

25. Boera, "ANAAC Briefing."

26. Ibid.

27. Mark Hersant, Lt. Col. USAF, "C-27A Program Takes Flight," in *The Enduring Ledger* (Kabul, Afghanistan: CSTC-A, 2009).

28. Boera, "ANAAC Briefing."

29. Fick and Nagl, "Counterinsurgency Field Manual: Afghanistan Edition," 46.

30. Corum and Johnson, *Airpower in Small Wars*, 434.

31. Ibid., 435.

32. Fick and Nagl, "Counterinsurgency Field Manual: Afghanistan Edition," 45.

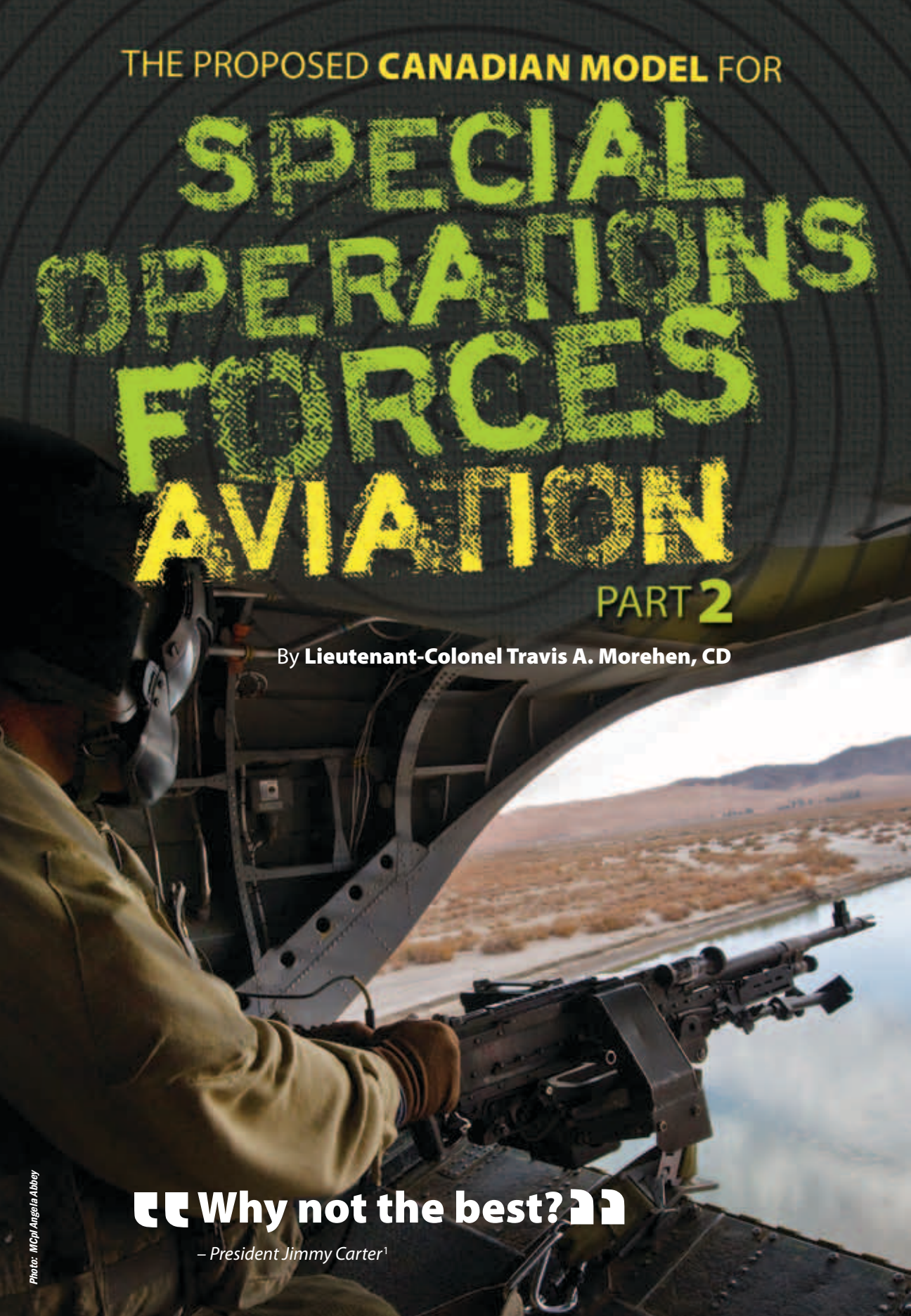
33. Stephen Tanner, *Afghanistan: A Military History from Alexander the Great to the Fall of the Taliban*, 2003 paperback ed. (Cambridge, MA: Da Capo Press, 2002), 325.

THE PROPOSED **CANADIAN MODEL** FOR

SPECIAL OPERATIONS FORCES AVIATION

PART 2

By **Lieutenant-Colonel Travis A. Morehen, CD**



"Why not the best?"

– President Jimmy Carter[1]

Photo: MCpl Angela Abbey

Introduction

This final chapter will take the information contained in Part 1[2] and synthesize the material presented into a final recommendation for a special operations forces (SOF) aviation selection model in Canada.

There are some recorded instances where SOF aviators from the 160th Special Operations Aviation Regiment (Airborne) (SOAR[A]) have demonstrated their ability to attempt or complete extremely difficult missions. It is extremely hard to judge whether conventional aviators would have had similar successes or failures. However, the selection process to become a SOF aviator lends itself to identifying those individuals who have the qualities and attributes to do extraordinary things. As suggested by Collin S. Gray, in order for SOF to reach its full potential, there needs to be political and institutional buy-in. There has long been an acceptance for a selection process within the Canadian Forces (CF) for Joint Task Force Two (JTF 2), but the Air Force has been remiss in embracing the same acceptance for SOF aviation.

There are several key concepts that are brought forward into this section. One concept is that SOF are used to carry out strategically or operationally vital missions and sensitive tasks directed by the highest levels of the military and government. SOF are likely to operate in conditions that are physically demanding and emotionally stressful with little supervision or support. A selection process is designed to identify the individuals that have the motivation, traits, attributes, and qualities to pass training and survive operations in an unforgiving environment. Ultimately, the function of SOF is to conduct economy of force operations by delivering a much bigger bang for their buck. The advanced selection process further mitigates the risk of wasting scarce training, financial, and human resources.

This part will start by looking at the current selection process for Canadian Special Operations Forces Command (CANSOFCOM) units including the current process at 427 Special Operations Aviation Squadron (SOAS). The next section will identify the challenges the Air Force and CANSOFCOM have in implementing a selection process. Finally, a proposed selection process will be identified for SOF aviation in Canada. The description of the selection process will provide a recommendation for the steps or gates that an individual has to go through to get to 427 SOAS. The recommendation will not, however, identify the standards to get through the process. Any attempt to define the standards or precise nature of the selection process would rapidly enter into a classified environment. The recommended process will conform to the SOF truths, especially that "quality is more important than quantity."

Current Canadian SOF Selection Models

The JTF 2 operations in Afghanistan and the formation of CANSOFCOM have allowed SOF in Canada to enter into the mainstream of the CF. As with United States Special Operations Command (USSOCOM), CANSOFCOM has a public domain website that details the recruiting process to gain entry into JTF 2, Canadian Special Operations Regiment (CSOR), and Canadian Joint Incident Response Unit (CJIRU).[3] At this point in time there is no formal recruiting or selection for the fourth unit of CANSOFCOM, 427 SOAS. This section of the paper will look at the recruiting and selection process for recruiting for all of the CANSOFCOM subunits to include the early days of dedicated aviation support to the Special Emergency Response Team (SERT) and JTF 2.

Stemming from the selection traditions of the Royal Canadian Mounted Police (RCMP) SERT, JTF 2 has a highly evolved and scientifically based selection process. Best practices have been adopted from other international SOF organizations and have been scientifically validated over the development of the unit.[4] The unclassified portions of the JTF 2 selection process are found openly on the internet, including a recruiting brochure, toll free number, and recruiting base-visits schedule.[5] The website identifies four phases for selection

to be a special operations assaulter.[6] Phase One is completed at home unit level and requires unit permission and a medical review. Phase Two is a fitness and swim test administered by home base Personnel Support Program (PSP) Fitness Staff. Upon successful completion of the fitness test, a cognitive ability and interview process with the Base Personnel Selection Officer (PSO) takes place to assess a candidate's suitability for JTF 2.

Phase Three selection is what has been traditionally referred to as the selection or assessment phase. For enlisted members it is a "[v]ery demanding seven-day job specific assessment process…" with an additional three days of selection for officers.[7] Candidates are assessed on the following:

> **…physical fitness (aerobic and anaerobic); performing effectively at heights, in water and in confined spaces; working as a member of a team; problem solving; and interpersonal skills. Assessments are conducted in high stress tactical settings to assess an applicant's ability to recall directions, identify and react to threats, handle weapons safely, and make decisions under physical and mental duress…. Officers [are also assessed on] organizational, analytical, communication, and presentation skills.[8]**

There are no detailed open source descriptions of what happens during the enlisted and officer assessment phases, but it is acknowledged that there are attribute stands. How and what these stands measure is considered classified, with only the chief instructor knowing the full scope of assessment procedures.[9] What can be learned from the open source literature of the JTF 2 recruiting brochure is that the unit is looking for individuals who possess intelligence, sense of duty, self-reliance, leadership, initiative, integrity, maturity, mental agility, dependability, ingenuity, physical robustness, mental robustness, emotional robustness, self-control, and high determination. In addition, officers are required to be decisive, confident, analytical, creative thinkers, and strong commanders.[10]

If candidates are selected, they then attend a seven-month Special Operations Assaulter Course. The core skills of an assaulter are "[s]urgical shooting, close-quarter battle, and physical fitness…" while Assaulter Officer's core skills are "… command, planning, communications, and adaptive thinking…."[11] Not described in detail here, there are similar yet less stringent selection processes for specialists, supporters, and coxswains. Everyone at JTF 2 undergoes some form of selection process, including civilian support staff.

The Canadian Special Operations Regiment has a similar process to JTF 2. Also published openly on the internet, the CSOR process consists of five phases. Phases one and two are essentially the same as JTF 2: candidate submission of an application supported by home unit, and successful physical fitness testing. The third step undoubtedly happens at JTF 2, but is not formally mentioned; there is a file review before a CSOR selection board. The fourth phase is an assessment phase that evaluates:

> **…physical fitness, teamwork and leadership abilities, problem solving and interpersonal skills…. Tactical scenarios will gauge your ability to make decisions under physical and mental duress.[12]**

The final phase of CSOR selection is the Special Operations Basic Qualification Course. This six-month course teaches CSOR proficiency with a variety of weapons systems, communications equipment, advanced medical training, field craft, patrolling, navigation, and insertion and extraction methods by land, sea, and air.[13]

The selection process for CJIRU is also published on the internet. The CJIRU website indicates that there are four steps in the selection

screening procedure. Step one is the completion of a seven-part application, including applicable PSP and PSO testing. Step two entails the forwarding of the application to CJIRU. The third step is attendance at an assessment centre for further testing, interviews, and screening. Very few details are available for this process. The fourth step is a pre-selection board prior to commencement of specialized training.[14]

The process for SOF aviation selection has never been formally established, not even since the early days of non-dedicated support to RCMP SERT. In 1990, the first dedicated support to RCMP was created in the form of SERT Assault Helicopter (SAH) Flight at 450 Tactical Helicopter Squadron based in Ottawa with three CH135 Twin Hueys, 13 pilots and six flight engineers.[15] 450 Squadron also flew CH147 Chinooks in support of the Army until their retirement. As recalled by one squadron member, Chinook crew members were given a personal choice to join the Utility Tactical Transport Helicopter Flight or join SAH Flight.[16] 450 Squadron, equipped with CH135 Twin Hueys, was moved to St-Hubert in 1994 and was eventually disbanded in 1996. The SAH Flight personnel were then transferred to 427 Tactical Helicopter Squadron in 1996 and became B Flight of that squadron.[17] B Flight provided the sole dedicated support to JTF 2 until the 1 February 2006 stand-up of CANSOFCOM.

Since the re-role of the squadron, it is now tasked to deliver special operations aircraft (SOA) effects to CANSOFCOM. While the current composition and sub-unit tasks of the squadron are not all classified, they are sufficiently sensitive in nature and will not be repeated here. What can generally be said is that there are elements of the squadron that are on extremely high readiness to support insertion, extraction and resupply for SOF in counterterrorism, direct action, special reconnaissance roles.[18] Other elements of the squadron can support the same tasks, but are not on the same readiness footing or habitual training standard.[19]There is a natural progression that can take place for aircrew coming into the squadron that allows them to master conventional tactical flying, basic special operations aviation (BSOA) manoeuvres, and then advanced special operations aviation (ASOA) manoeuvres.[20] The main difference between BSOA and ASOA tasks is the precision in which manoeuvres are performed and the platforms on which they are performed.

427 SOAS is completely different from its sister units in that there is no formal recruiting, application, assessment and selection process. Pilots, flight engineers, technicians, and other support staff are posted to the unit without having to volunteer, go through a pre-screening process, be subjected to a psychological assessment, or attend an

Photo: MCpl Robert Bottrill

assessment phase. Members are posted to 427 SOAS through negotiations with career managers and losing units. There are essentially two streams by which aircrew can find themselves posted to 427 SOAS. The first stream would be structured for new pilots who receive their wings from the Basic Helicopter Course in Portage La Prairie, Manitoba, and are then posted into one of the helicopter squadrons in the Air Force. This may be a search and rescue Cormorant, maritime helicopter Sea King, or a tactical helicopter Griffon squadron, depending on service requirements.[21] Pilots may have a preference on aircraft type and location, but the requirements of the service need to be met first. Former SOF aviators that are now instructors, informally attempt to steer promising SOF candidates to helicopters and 427 SOAS.[22]

The second method for posting to 427 SOAS is by joining the squadron as a second-tour or experienced pilot. In this instance, most pilots are volunteers, as they have been exposed to SOF aviation either directly or indirectly. In some cases the commanding officer (CO) will attempt to "head hunt" from other units based on recommendations from SOF aviators or other COs. Generally, these pilots are top performers in their current units and the losing CO may be reluctant to let them leave. Yet, no selection or assessment is done to enter the squadron except if entering directly into the high readiness flight that conducts advanced manoeuvres.

If entering into the high readiness flight either from another squadron or from another flight already internal to the squadron, there are assessment flights that are completed for pilots and flight engineers. Generally, there is a day and a night flight flown with a standard or flight training officer / flight engineer, as applicable. The flight consists of basic and advanced SOA manoeuvres being demonstrated, and then they are expected to be imitated to the best of the candidate's ability. The assessment flight is geared to assess the candidate's ability to learn new manoeuvres quickly, to know their own limits, to handle stress in the cockpit, and to observe general safe flying practices and airmanship. A follow-on interview with the high-readiness flight commander probes the candidate's motivation, determination, and expectations. The high-readiness flight commander will make a recommendation to the CO.[23] The CO has the final authority for internal postings and will determine how much effort will be spent to attempt to select a pilot from another squadron.

The above process worked to a degree when only one–third of the squadron was dedicated to SO. Now that the entire squadron is dedicated to SO there is reduced flexibility to conduct SO across the entire spectrum of missions and tasks if there are unsuitable pilots. If a "dud" pilot was posted to 427 SOAS before 1 February 2006, he was placed in a non-SOF flying position and could be gainfully employed for a normal posting tour conducting conventional aviation tasks. At the end of their tour they were posted onwards to another unit or organization.

The increased demands of SOF in Canada led to the formation of CANSOFCOM and the resultant requirement for an entire helicopter squadron to be dedicated to SO.[24] There is no room for aviators at 427 SOAS that do not have the capability to become fully operational and useable through the entire spectrum of SO. In order to mitigate failure of these missions, there must be a selection process that adheres to the SOF truths that "humans are more important than hardware"; "quality is more important than quantity"; and "competent SOF cannot be created quickly after emergencies occur."[25]

Common to CANSOFCOM units, except 427 SOAS, is a formally supported CF recruiting, application, selection, and assessment process. The process is supported through the CF chain of command even to the extent of giving the units the ability to define their own job-based physical fitness, medical and psychological standards. It has been through this selection process that JTF 2, CSOR, and CJIRU have been able to put "quality before quantity" and identify motivated individuals that are best suited for Canadian SOF. The next section of the paper will outline the joint responsibility of the Air Force and CANSOFCOM to develop a selection process.

AIR FORCE AND CANSOFCOM CHALLENGES

The development of a formally accepted selection process for SOF aviators has its greatest challenges from the perspective of the Air Force. Within this section there are several issues that the Air Force faces that impede the development of a selection process. The first and most important issue is the institutional acceptance that a formal selection process is required for SOA aviators. The second issue to be examined is the unique relationship of 427 SOAS under operational command (OPCOM) of CANSOFCOM and the resulting division of responsibility for generation of SOA capabilities.

Photo: MCpl Robert Bottrill

Singularly and/or in combination, these issues must be addressed and overcome if there is to be a sustainable and viable selection process.

The first issue to be examined is the requirement for the Air Force to accept as an institution the requirement for a SOF selection process. There have been precedents set for the CF and Air Force to accept additional selection criteria for two of its air units. The Air Force has endorsed a selection process for 431 (Air Demonstration[AD]) Snowbirds Squadron, and the Assistant Deputy Minister Material (ADM[MAT]) Aerospace Engineering Test Establishment (AETE) has developed Test Pilot selection criteria.

The CO of AETE related that the current premise of selection for test pilots was to save financial resources, as the training program has an approximate cost of $1 million.[26] The CF can ill afford to send a pilot to a foreign test pilot school for that amount of money just for them to fail the program. AETE has an extensive selection process that is thoroughly documented by Internal Project Directives and an AF 9000 Plus quality assurance process.[27] The objective of the AETE selection process is to evaluate the candidate's "potential to succeed at [test pilot school],… suitability for flight test work at AETE, and demonstrate … the workload and nature of work to be expected…."[28] Also related by CO AETE was that there is a decreasing experience pool to draw from in the CF. As a result AETE has been challenged to draw sufficient qualified candidates to meet the growing needs of the ADM (MAT) and the Air Force.[29] Subsequently, there has been a reduction in the initial application criteria, but not the end state criteria. The cost of failure in test flying aircraft goes beyond the cost of the course. Test flying by its very nature is hazardous and can put personnel and materiel at risk. By having a selection process, AETE is able to minimize risk by selecting motivated quality candidates.

The process for selection into 431 (AD) Squadron is also accepted by the Air Force. As an AD squadron, the Snowbirds are not facing the same risks as SOF soldiers in combat, but the physical risks are still quite high. Eight Snowbird pilots have lost their lives since 1972 during training or show accidents.[30] Any

failure on the part of the Snowbirds could also damage Canada's national image. The Snowbirds are an iconic image of Canada and serve as ambassadors to the world, flying over 60 air shows a year in North America.[31] The Snowbird selection process is designed to initially assess the candidate's motivation, and the potential of the candidate to work with the team. This assessment is made by current team members that review the candidate's application and home unit CO's recommendation. If accepted at this point, the candidate is invited to a flying tryout to evaluate their piloting ability. The flying assessments are designed to grade a pilot's skill level based on what position in the formation they will occupy. Depending on the position, some skills are weighted more than others and are plotted graphically and statistically. Final selection is made by consensus by the serving team members with the CO having the final decision. If accepted, candidates then continue through a formal training process until show season.[32] Due to the nature of extreme physical risk and the projection of national image, the Snowbirds can accept no less than the best-suited candidates available. They too require "quality before quantity."

The selection processes for AETE and the Snowbirds demonstrate that there are institutional examples that the Air Force can draw from in realizing that in order to save resources and mitigate risk, a selection process for 427 SOAS is both logical and required. It is desired that this paper will greatly assist educating members of the Air Force who currently do not understand the underpinning reasons for a selection process. CANSOFCOM has already grasped the raison d'être for a selection process for their other units but the management of 427 SOAS is not completely under their control. CANSOFCOM has only been given a partial responsibility for the ultimate success or failure of the squadron.

The second major challenge to be examined is the unique relationship 427 SOAS has with the Air Force and CANSOFCOM. Prior to 1 February 2006 and the OPCOM detachment to CANSOFCOM, 427 Squadron was placed under the 1 Wing and 1 Canadian Air Division Order Of Battle. To facilitate the transfer of 427 Squadron to CANSOFCOM, a formal transfer of command authority (TOCA) document was jointly developed by Air Force and CANSOFCOM staff as a means to delineate the Air Force and CANSOFCOM responsibilities for the unique relationship: The TOCA empowers Comd CANSOFCOM with the necessary authority to shape 427 Sqn to meet his operational objectives while maintaining the Air Force oversight of key processes required for the safe and effective generation of this specialized capability.[33]

The Air Force retains its traditional residual responsibilities: approval authority for air doctrine; operational airworthiness including operational procedures and aircrew training standards; technical airworthiness; flight safety issues; aircraft maintenance policy and technical matters; aircraft specific logistics; and personnel management of core Air Force personnel.[34] As related to operational airworthiness, CANSOFCOM has the responsibility for staffing authorization requests to 1 Canadian Air Division (1 Cdn Air Div) any SOA specific changes to standard manoeuvre manual, flying orders, SOA tactics, SOA doctrine, SOA Operational Risk Assessments, and SOA flight testing requirements.[35]

Directly related to personnel management, the TOCA specifically acknowledges that "CANSOFCOM and SOA support requires the creation of specific and speciality skill sets, as well as certain mental and physical attributes."[36] The TOCA also recognizes the requirement for a delicate balance that must be struck between the long training period to generate an SOA aviator and the premature turnover of personnel. The priority manning of 427 SOAS is further complicated by the current undermanned pilot trade and the increasing demands for qualified tactical aviators to man overseas deployments of Chinooks and Griffons.[37]

As related to the development of a SOA aviator selection process, the TOCA identifies the following division of responsibilities:

> **. . . the responsibility for producing and maintaining generic CANSOFCOM selection criteria rests with Comd CANSOFCOM, while the responsibility for producing and maintaining SOA-specific selection criteria rests with Comd 1 Cdn Air Div as an extension of standards/pers management policy.[38]**

While the TOCA has outlined the responsibilities, it is now incumbent upon both organizations to work together to develop the selection criteria, personnel management policies, and sustainable vision for the future. It is understandable that in the past three years the pace of force development has been frantic at CANSOFCOM, and the Air Force has had other priorities, but the time has come to properly address the selection issue. Luckily so far, SOF aviation has only been measured by its success and not its failures.

The future is uncertain when and where the government of Canada will require SOF aviation, but the December 2008 kidnapping of Canadian United Nations diplomats Robert Fowler and Louis Guay in Africa speaks to having capable forces ready.[39] A hostage rescue mission is the type of mission CANSOFCOM may be directed by the government to plan and execute. Depending on the tactical situation, 427 SOAS may be called upon to provide insertion, extraction, and reconnaissance capabilities to the assigned special operations task force. It is also logical then that these aviation forces should be manned by the best suited aviators possible and be generated before the crisis occurs. Finally, there are those who doubt the capability of the Griffon to support such an activity, but they do not take into account the ingenious and creative thinking that will allow a selected SOF aviator to adapt and find some means to exploit every potential capability.

Another recent example is the April 2009 hijacking of a CanJet airplane in Montego Bay, Jamaica. CanJet is a Canadian company whose jet was full of vacationing Canadian citizens. It is reported that the Jamaican assault forces had been trained by elements of CANSOFCOM's CSOR.[40] Falling under a CANSOFCOM Defence, Diplomacy, and Military Assistance role, it is conceivable that 427 SOAS crews could also be similarly tasked to train Jamaican Defence Force aircrew in SOA techniques. The successful resolution to such a hijacking event brings credit to those that train, plan, and execute it. If such a rescue had failed, Canada would not have wanted the blame assigned to itself for not having provided the best suited and qualified instructors available. Having selected, trained, and equipped SOF gives the government flexibility of options in dealing with high-risk or politically sensitive situations. The Air Force should be eager to positively influence events of such strategic nature.

Proposed Canadian Model for SOF Aviation

The proposed selection model will provide a recommendation on the path an individual needs to take to become an aviator at 427 SOAS. The model is primarily developed for pilots but could be easily adapted to provide a process for other aircrew such as flight engineers and mission specialists.[41] The selection model would potentially have to be extensively revised for technicians and other support trades. This selection model cannot be adopted overnight because 427 SOAS is not starting off as a new unit like the 160th SOAR (A), JTF 2, or CSOR. There are "legacy" personnel that need to be dealt with concurrently with the implementation of the new selection process. Consistent with CANSOFCOM units and previously described United States SOF units, the proposed selection model will consist of a recruiting campaign and four phases: Phase One – unit level application, Phase Two – home and base level screening for fitness and suitability, Phase Three – personality and flying assessment, and Phase Four – probationary posting and initial SOA training.

Recruiting Campaign

The first issue in creating a selection process at the unit level is establishing the level of determination and motivation that a member has to come to 427 SOAS. JTF 2, CSOR, and CJIRU all conduct recruiting tours that travel to bases around the country to educate as much as possible within operational security (OPSEC) restraints, the realities of training and operations. High readiness elements of 427 SOAS had conducted recruiting visits to other tactical helicopter squadrons and flying schools in Moose Jaw and Portage La Prairie, but they have since been discontinued due to lack of effectiveness.[42] Properly described within OPSEC limits, potential members of the squadron can get a feel for whether the career of a SOF aviator is one they wish to excel in. Recruiting will allow motivated individuals to make an informed decision on their desired career path. This could be argued as the most important part of selection; self-selection as determined by one's own motivation and determination.

A shortcoming of not having a recruiting and selection process is that even if people are motivated to come to 427 SOAS, there is no ability to determine what that motivation may be. Some aircrew may come out of the training system looking for the extra hazard pay, some may wish to move to Petawawa because their service spouse is posted there, and others may desire the challenge because they possess a true warrior ethos. It is the latter individual that most SOF organizations seek, as a warrior ethos is critical to achieving mission success when faced with the stress and rigours of combat. Major Jerry D. Garrett's monograph "The Problem of Motivation in the Third Dimension of Combat: What's the Solution?" examines the factors that affected American B-52 crews during intense operational periods in Vietnam. He challenges the U.S. Air Force's focus on aircraft technology and suggests more attention should be paid to the moral domain as an indicator of motivation and success in combat.[43] Similarly, there are several articles about the actions of 160th SOAR(A) aircrew that demonstrate the difference a highly motivated and determined warrior can make with regards to mission completion and saving lives.[44] A selection process allows a CO an opportunity to have intimate discussions with potential candidates to see if they have the desired motivation and warrior ethos.

An Air Force-blessed and CANSOFCOM-supported recruiting campaign must take place in order to generate interest in the roles, mission, and tasks of 427 SOAS. Just as there are advertisements in Department of National Defence (DND) publications for 431 (AD) Squadron Snowbirds, AETE test pilots and other CANSOFCOM units, 427 SOAS needs to be included. A multimedia presentation should be developed that can be given by recruiters during visits to flying training schools, units and symposiums. The presentation or video should be easily accessible on the Defence Wide Area Network. The recruiting

Photo: Lt(N) Meghan Marsaw

campaign should target two audiences: pilots that are coming through training, and second tour or experienced pilots. The issuance of CANAIRGENs [Canadian Air Force General Order] or CANFORGENs [Canadian Forces General message] along with distribution in DND publications like *The Maple Leaf* would ensure wide distribution. The similar process used by other CANSOFCOM units, the U.S. Green Berets, and the 160th SOAR(A) allows a candidate's motivational desires to be known as a function of a robust recruiting campaign.

PHASE ONE AND TWO—HOME UNIT AND BASE LEVEL APPLICATION

Up until Phase Four, there would be two streams of selection–one for undergraduate pilots and a second for experienced aircrew. The application details of Phases One and Two are the same for both undergraduate pilots and experienced aircrew. Phase One would be the submission of a home unit endorsed application to a joint Air Force / CANSOFCOM recruiting office. The application would be very similar to those found on the JTF 2 and CSOR recruiting websites.[45] Provided the Phase One application was found suitable, the candidate would be invited to complete Phase Two. Phase Two would be a physical fitness test, a swim test, and an assessment completed by a PSP Staff and Base/Wing PSO for 427 SOAS suitability. The standards and measures for the physical fitness tests would have to be jointly developed by the Air Force and CANSOFCOM to represent the minimum operational fitness level required. A potential suitable standard would be the current CF EXPRES test to an exempt level in conjunction with the current Army Battle Fitness Test. Likewise, the PSO cognitive ability test may have to be specifically structured for aircrew in lieu of the standard ab initio recruit aircrew selection test.

Through the recruiting process, undergraduate pilots should be able to indicate their preference as early as possible in their training. This may even be as early as basic flying training before it is determined what type of airframe they will be flying. A program similar to the U.S. Green Beret 18X program could be instituted except the candidates would be selected during flying training rather than straight from civilian life. If the 18X model was taken to an extreme measure, pilots could be recruited from other CF military occupational specialties through occupation transfers (OT). There has been more than one Combat Arms Officer that has successfully transferred to pilot. These OT candidates have the potential of being more suitable in regards to maturity and previous experience. The undergraduate or OT candidate would be funnelled through basic helicopter training and be given a guaranteed Phase Three assessment near or at the end of their helicopter course. If the pilots are not selected then they could be still be posted to any rotary wing aircraft type and subsequent operational training unit (OTU).

PHASE THREE—PERSONALITY AND FLYING ASSESSMENT

Phase Three is at the heart of the selection process. Up to this point, the candidate has met the initial medical, physical, and career file review. The main difference in the selection process between undergraduate and experienced pilots would be the timing and application of Phase Three. Although potentially hard to manage due to the dual-stream nature of Phase Three, it is now time to determine if under physical and emotional stress the candidate has the right attributes and skills that will predict success in training and operations.

In accordance with division of responsibilities of the TOCA, the development of these attributes would fall under the domain of CANSOFCOM. Support from CANSOFCOM staff would be required to generate the required testing mechanism and standards. The U.S. Army Research Institute for the Behavioral and Social Sciences has been quite active in this area, attempting to capture the personality profiles of U.S. Army helicopter pilots.[46] The deputy commanding general of the U.S. Army John F. Kennedy Special Warfare Center

and School, Brigadier General Bennet Sacolick, considers "…maturity, commitment, judgment, courage, initiative, decisiveness, empathy, self-confidence, and adaptability" as essential SOF qualities.[47] These qualities would be a good start to assess in 427 SOAS aircrew.

Due to its technical nature, the flying assessment of Phase Three is also very critical. Some pilots may have all the motivation, warrior ethos, and prerequisite SOF personality traits, but they may not be good hands and feet pilots. Supported units have a very long memory when it comes to one of their members being bounced off a building or inserted into a swamp. The common saying is that "you are only as good as your last insert." The flying assessment phases could be divided into two streams: one for undergraduate pilots and the other for experienced pilots. The first stream to be described will be for undergraduate pilots.

If an undergraduate volunteer passes through Phase One and Phase Two of selection, a modified pre-Phase Three personality and flying assessment could be carried out. A limited Phase Three flying assessment is possible at the Portage La Prairie Basic Helicopter Course, as the new syllabus now includes flying Bell 412CF Outlaw aircraft including Night Vision Goggle flying. The Bell 412 Outlaw has been converted from CH146 Griffons (militarized Bell 412) and have been updated with glass cockpits and advanced engine controls.[48] It is conceivable that although not trained in tactical flying by this time, a modified test assessment could be developed to measure potential SOA criterion. Alternatively, the candidate's flying ability could be assessed by examining the student's Air Lesson Plans and Flying Test results. The Chief Helicopter Instructor or a former SOA pilot could make a recommendation for SOA employment based solely on course results to date.

The flying assessment portion of Phase Three for an experienced pilot would consist of day and night flights at 427 SOAS. If the candidate is a tactically qualified Griffon pilot, it is a very simple process. All that would be necessary would be a review of the candidate's log book for currency requirements and then carry out the flight with a detailed mission and crew brief. If the candidate is helicopter wings qualified, but neither current nor qualified on the Griffon, there may have to be allowances for a familiarization flight. Current currency and manning regulations may have to be requested to be modified to allow the flight to take place. If the candidate is a fixed wing pilot with no previous helicopter experience it would be extremely difficult to conduct an accurate assessment of SOA helicopter aptitude. Circumstances may direct that a detailed review of the candidate's past flying file be carried out with emphasis on annual flying and simulator assessments. Essentially, fixed wing pilots would have to join the undergraduate 18X program and complete the Basic Helicopter Course prior to a full assessment being made.

If the candidate is a fighter pilot, there is an added dimension, as they are now working with a crew rather than flying by themselves. Further assessment may be required for those pilots as the SOA environment is extremely team oriented between the pilots, the flight engineer, and the "customer" in the back. The 1997 United States Air Force Armstrong Laboratory Report *An Assessment Methodology for Team Coordination in Combat Mission Training* developed a method to assess mission readiness from the viewpoint of crew resource management. The tool was developed to identify individual and team behavioural processes for Air Force special operations component (AFSOC) MC-130 SOF aircrew. The results were used to generate an effective simulator combat mission training program.[49] Some similar process may be developed in conjunction with flying assessments to ensure potential crew cooperation and coordination are measured.

PHASE FOUR—PROBATIONARY POSTING AND INITIAL SOA TRAINING

Only after successful completion of Phase Three would aircrew receive a probationary posting to 427 SOAS. Phase Four would take the candidate through ground training such as advanced survival, escape/evasion, resistance

and extraction (SERE), resistance to interrogation (R2I) Level C, and "move, shoot, and communicate" skills.[50] The aircrew could conduct this training while awaiting their Griffon OTU. The end of Phase Four would be dependent on the successful completion of the BSOA course resulting in the removal of their probationary status at 427 SOAS. The SOA aircrew may now be fully employed operationally. At any time a member fails to meet the prescribed standards in the process, or fails to perform adequately, a 427 SOAS Career Review Board would determine suitability for further training and employment. If found unsuited, the individual would be posted out of the unit regardless if it is the designated posting season or not. By having a selection process up front, it potentially reduces the frequency and cost of unexpected postings and moves due to failures in selection or training. The career management system can hardly afford to fund a full-cost move for aircrew if they have only been at the squadron for six months and failed their SERE or BSOA course.

Even if the above selection process was fully supported and adapted by the Air Force and CANSOFCOM, there are significant challenges for implementation. There is the issue of what to do with current "legacy" unprocessed aircrew. For those aircrew that have already met the flying standard for BSOA or ASOA, only a psychological assessment would need to be administered. This would go on their file for further reference, and in extreme cases may be the lever that the CO uses to post qualified but no longer gainfully employable aircrew. For aircrew that have not yet reached BSOA or ASOA status, there should be a psychological and flying assessment completed. If it is deemed that they do not meet any of the standards, the Air Force must give the CO the ability to post those individuals out to conventional units.

Once the selection process has been approved and blessed by the Air Force and CANSOFCOM, it is assessed that the greatest implementation challenge will come from CANSOFCOM. CANSOFCOM must be prepared to lose capability in terms of lines of operation, standby commitments, and force generation activities while the squadron changes from legacy status to a true SOF organization. The squadron has never been afforded that

Photo: Sgt Donald Clark

opportunity to transform itself. If SOF continues to be differentiated from conventional forces by having soldiers and airmen and airwomen being specifically selected rather than by the missions they conduct, the squadron must be allowed to select its personnel. If during the implementation process it is deemed that one–third or a half of the legacy personnel do not meet the SOF aviator standard, will CANSOFCOM reduce 427 SOAS's operational tempo by that same amount? If they do not, there is an extreme risk of burnout and fatigue which can lead to errors. Errors cost financial, materiel, and personnel resources, and the selection process becomes self-defeating at this point. It is only through the eventual implementation of a joint Air Force and CANSOFCOM selection process that 427 SOAS will become an SOF unit. Consistent with the theory that it is the people rather than the mission that defines SOF, 427 SOAS aircrew have yet to make that transition.

> **"More is not better, better is better."**
>
> - Former U.S. Army Chief of Staff, **General Gordon R. Sullivan**[51]

> **"We sleep safe in our beds because rough men stand ready in the night to visit violence on those who would do us harm."**
>
> **- George Orwell**[52]

Conclusion

The requirement for SOF has grown significantly since the attacks on the World Trade Center in September of 2001. SOF has been considered the force of choice when dealing with transnational non-state terrorism. The literature review of the first chapter sought to identify the scope and breadth of SO/SOF theory and doctrine. Though varied by a function of vocabulary and definition, the literature is consistent that it takes extraordinary people to conduct extraordinary missions. The SOF truths provide a simple common thread through the majority of literature and offer a guide for the development and employment of SOF. Directed by the highest levels of the government and military, SOF provides an economy of force choice for sensitive tasks and missions that conventional forces cannot provide.

The development of a selection process is what has commonly allowed militaries to choose the individuals that will have the greatest chance of succeeding and surviving training and combat. The criteria and mechanisms have evolved significantly since WW I, but the end state has not changed—selection provides a means to save financial, materiel, and personnel resources that would otherwise be wasted. The operational environment that the SOF soldier find themselves in has led to a focus on an individual's personality profiles, qualities, and attributes. An ideal SOF aviator would possess the CANSOFCOM core values of loyalty, sense of duty, integrity, courage, relentless pursuit of excellence, indomitable spirit, shared responsibility, creativity, and humility.[53]

The selection process must include a measure of a candidate's motivation and desire to excel in the SOF community. With focused determination, the candidate will persevere through the mental and physical rigours that are presented during training and operations. The selection process must appeal to a wide base of applicants so that there can be a sustainable mix of inexperience and experience in the Squadron. The BSOA and ASOA training modules may have to change, but with selected individuals entering the unit, the courses will no longer cater to the lowest common denominator as they do now.

If CANSOFCOM truly believes the SOF truths that "humans are more important than hardware"; "quality is more important than quantity"; "SOF cannot be mass produced"; and "SOF cannot be created quickly after an emergency occurs", then they cannot allow the squadron to continue on its current path.

Beyond the wording in the 427 SOAS TOCA document, CANSOFCOM needs to champion the cause for SOF aviator selection with the Air Force. The Air Force, being cognizant of the nature of CANSOFCOM activities, must realize that it takes "…**specially selected personnel** that are **organized**, **equipped** and **trained** to conduct high-risk, high-value special operations…."[54] CANSOFCOM must also be prepared to accept a decrease in capability while the process is implemented. 427 SOAS was begrudgingly assigned to CANSOFCOM by the Air Force under a unique command relationship. It has been suggested that some Air Force officers anecdotally would wish for nothing more than CANSOFCOM to fail in managing 427 SOAS so that it could be pulled back into the conventional blue Air Force. Canada has so far been lucky enough not to have had its Desert One or Blue Ribbon panel like the 160th SOAR(A), but if the Air Force and CANSOFCOM fail to properly manage mutual expectations of 427 SOAS's generation and employment, special operations aviation in Canada will be measured by its failures and not its victories. ■

A graduate of Royal Roads Military College, Lieutenant-Colonel Travis Morehen received his pilot wings in November 1995, subsequently serving with 427 Tactical Helicopter Squadron, Petawawa, and at 1 Wing Headquarters, Kingston, with tours in Bosnia, Haiti and Afghanistan. In 2005 as a flight commander and operations officer, he assisted in the transition of 427 to a Special Operations Aviation Squadron. Graduating from Canadian Forces College, Toronto, in 2009, he is currently employed as the A3 Tactical Aviation at 1 Canadian Air Division, Winnipeg.

List of Abbreviations

1 Cdn Air Div	1 Canadian Air Division
AD	air demonstration
ADM(MAT)	Assistant Deputy Minister Materiel
AETE	Aerospace Engineering Test Establishment
AFSOC	Air Force Special Operation Command
ASOA	advanced special operations aviation
BSOA	basic special operations aviation
CANAIRGEN	Canadian Air Force General Order
CANFORGEN	Canadian Air Force General Message
CANSOFCOM	Canadian Special Operations Forces Command
CF	Canadian Forces
CJIRU	Canadian Joint Incident Response Unit
CO	commanding officer
CSOR	Canadian Special Operations Regiment
DND	Department of National Defence
JTF 2	Joint Task Force Two
OPCOM	operational command
OPSEC	operational security
OT	occupation transfer
OTU	occupational training unit
PSO	personnel selection officer
PSP	Personnel Support Program

R2I	resistance to interrogation
RCMP	Royal Canadian Mounted Police
SAH	SERT assault helicopter
SERE	survival, escape/evasion, resistance and extraction
SERT	Special Emergency Response Team
SO	special operations
SOA	special operations aircraft
SOAR(A)	Special Operations Aviation Regiment (Airborne)
SOAS	Special Operations Aviation Squadron
SOF	special operations forces
TOCA	transfer of command authority
US	United States
USSOCOM	United States Special Operations Command

Notes

1. [1]Jimmy Carter, *Why Not the Best?: The First Fifty Years* (Toronto; New York: Bantam Books, 1976). Chapter Five of the book is titled "Why not the best?" This chapter deals in part with the selection of personnel by Admiral Rickover to join the U.S. Navy Nuclear program. Rickover's selection interviews were legendary but it goes to show the exacting standards that Rickover placed on his men. Under his watch as the head of the nuclear program, it is reputed that the Navy had a perfect safety record with nuclear reactors.

2. Travis A. Morehen, "A Selection Process for Special Operations Forces Aviation in Canada," *The Canadian Air Force Journal* 2, no. 4 (Fall 2009): 6-23. Available online http://trenton.mil.ca/lodger/CFAWC/eLibrary/Journal/Current_Issue_e.asp (accessed December 7, 2009).

3. Department of National Defence (DND), "CANSOFCOM Careers / Recruiting." Available online at http://www.cansofcom.forces.gc.ca/cr/index-eng.asp (accessed March 15, 2009).

4. Author interview with Former Chief Instructor and Selection Officer of JTF 2, 23 February 2009.

5. DND, "JTF 2 Recruitment and Selection Process." Available online at http://www.jtf2.forces.gc.ca/rec/sp-ps/soa-fis/index-eng.asp (accessed March 15, 2009).

6. JTF 2 refers to its "operators" as assaulters, whereas CSOR still defines its fighting troops as operators.

7. DND, "JTF 2 Recruiting Brochure," 16. Available online at http://www.jtf2.forces.gc.ca/rec/docs/brochure-eng.pdf (accessed March 15, 2009).

8. DND, "JTF 2 Recruitment and Selection Process."

9. Author interview with former Chief Instructor and Selection Officer of JTF 2, 23 February 2009.

10. DND, "JTF 2 Recruiting Brochure," 3, 6, 9.

11. Ibid., 6, 9.

12. DND, "CSOR, Recruiting and Selection, Special Operator." Available online at http://www.csor.forces.gc.ca/rs/so-os-eng.asp (accessed March 15, 2009).

13. Ibid.

14. DND, "CJIRU, Careers / Recruiting." Formerly available at http://www.cansofcom-comfoscan.forces.gc.ca/cji-uii/cjirucr-uiccr-eng.asp (accessed March 15, 2009). Link no longer active.

15. 427 Squadron Association, "ROAR April 2009, Special Operations Aviation in Canada Historical Timeline." Available online at http://www.427squadron.com/roar/roar_apr09_page_5.html; (accessed April 20, 2009).

16. LCol Townsend e-mail to author 20 April 2009. LCol Townsend was a Captain at 450 Squadron when he was given the choice to go to SAH Flt. He does not recall any formal selection criteria to support JTF 2 at that time.

17. 427 Squadron Association, "ROAR April 2009, Special Operations Aviation in Canada Historical Timeline."

18. DND, *Canadian Special Operations Forces Command: An Overview* (Ottawa: DND Canada, 2008), 11.

19. When the author left 427 SOAS as the Squadron Operations Officer in summer 2008, there were ongoing efforts to identify the correct internal structure of the squadron to meet the required balance between force generation and force employment demands.

20. DND, *B-GA-002-146/FP-001 - 1 Canadian Air Division Standard Manoeuvres Manual, CH146 Griffon Helicopter*, Chapter 2, 400 series tasks (June 2008). The 400 series tasks are classified portions of the SMM that pertain to BSOA and ASOA tasks.

21. DND, "Canadian Forces Recruiting, Pilot Officer." Available online at http://www.forces.ca/html/pilotofficer_reg_en.aspx (accessed April 20, 2009).

22. As related by a former SOA pilot who then became an instructor in Moose Jaw. An informal network is established with former SOA pilots who are instructors to find out who the promising candidates are.

23. As described by the current high readiness Flt Commander, 21 April 2009.

24. Darcy Knoll and Scott Taylor, "Canada's Commando Commander; Colonel David Barr discusses the creation of the Canadian Special Forces Operations Forces Command," *Esprit de Corps* 14, no. 6 (July 2007): 8-11.

25. Full knowledge of 427 SOAS tasks are limited by OPSEC and are compartmentalized. If there is a failing in this paper it is that there is an inability to describe how important these tasks are and why in very specific terms a SOF selection process is so important.

26. Author's telephone conversation with Colonel Meiklejohn, CO AETE, 24 February 2009.

27. DND, AETE, *Screening and Selection of Candidates for Qualified Test Pilot, Flight Test Engineer, and Flight Test Navigator* (Canadian Forces Base Cold Lake: AETE AF9000 Plus MAP, Part 2, QPM 4.9.11.103,) 27 February 2008.

28. DND, AETE, *Internal Project Directive 127/137 Test Pilot, Flight Test Engineer, and Flight Test Navigator Candidate Evaluation* (Canadian Forces Base Cold Lake: IPD 127 (RW2)) 23 September 08, 2.

29. AETE is a unique CF air unit as it works for ADM(MAT) and with the Air Force as its "customer."

30. DND, "In the Memory of Fallen Snowbirds." Available online at http://www.snowbirds.forces.gc.ca/v2/tt-le/ts-hs-eng.asp (accessed April 23, 2009).

31. Department of National Defence, "Snowbirds 2009 Air Show Schedule." Available online at http://www.snowbirds.forces.gc.ca/v2/as-sa/sch-cal-eng.asp (accessed April 23, 2009).

32. E-mail to author from Capt Mike "MIGS" French, Snowbird #3, 431 (AD) Squadron Selection and Tryout OPI, 16 March 2009.

33. Steve Lucas, Chief of the Air Staff, *Transfer of Command Authority – 427 Squadron,* (NDHQ Ottawa: file 3010-1(D Air SP), 27 January 2006), 1.

34. Ibid., Annex A, 5-6, 14-17.

35. Ibid., 6-8.

36. Ibid., 16.

37. Carol Potvin, *Pilot Career Manager Brief*. Updated 16 February 2009. As of February, the CF was under strength by approximately 177 (16%) trained pilots at the Captain/Lieutenant rank.

38. Lucas, *Transfer of Command Authority,* Annex A, 17.

39. Bruce Campion-Smith, Richard J. Brennan and Michelle Sheppard, "Al Qaeda 'abused' Canadians," *The Toronto Star*, April 23, 2009. Available online at http://www.thestar.com/news/canada/article/622994 (accessed April 24, 2009).

40. David Pugliese, "Jamaican assault team trained by Canadians," *The National Post*, April 20, 2009. Available online at http://www.nationalpost.com/news/story.html?id=1516241 (accessed April 23, 2009).

41. Air Force flight engineers and Army combat arms mission specialists are non-commissioned members that fly as aircrew in the back of aircraft. They provide situational awareness to the crew when flying in a tactical environment, operate the majority of the aircraft mission kits including door guns, supervise troop loading and unloading, other mission essential duties. The Flt Engineers have additional technical and mechanical duties that are a result of their aircraft technician background. SOA flt engineers and mission specialists have additional duties related to SOA insertion and extraction techniques.

42. As related to the author by a former SOA Flight Commander, Fall 2006. Some briefings were attended by non-SOA aircrew wearing ski masks as a joke, thereby demonstrating their lack of seriousness. Some commanding officers would not allow the briefings to take place, or if they did so, would not allow aircrew to volunteer to leave their units.

43. Jerry D. Garrett, "The Problem of Motivation in the Third Dimension of Combat: What's the Solution?" (student monograph, United States Army Command and General Staff College, 1991): 40. Available online at http://cgsc.cdmhost.com/cgi-bin/showfile.exe?CISOROOT=/p4013coll3&CISOPTR=1655&filename=1656.pdf (accessed February 21, 2009.

44. James A. Schroder, "Ambush at 80 knots: Company B, 3/160th SOAR," *Special Warfare* 15, no. 3 (September 2002): 39-41. Online link: http://proquest.umi.com; (accessed January 28, 2009).

45. DND, "Application for Service with JTF 2," Available online at http://www.jtf2.forces.gc.ca/rec/docs/asjtf2-defoi2-eng.pdf (accessed March 15, 2009).

46. John A. Caldwell, Jr., *et al,* "Personality Profiles of U.S Army Helicopter Pilots Screened for Special Operations Duty," *Military Psychology* 5, no. 3 (September 1993): 187-199. Available online at http://ejscontent.ebsco.com/ContentServer.aspx?target=http%3A%2F%2Fwww%2Einformaworld%2Ecom%2Fsmpp%2Fftinterface%3Fcontent%3Da785379270%26format%3Dpdf%26magic%3Debscohostejs%7C%7CAA3D3EFB68C36A (accessed February 23, 2009).

47. Bennet Sacolick, "Character and the Special Forces Soldier," *Special Warfare* 22, no. 1 (January/February 2009): 8-9. Available online at http://search.ebscohost.com/login.aspx?direct=true&db=mth&AN=37297200&site=ehost-live (accessed February 6, 2006).

48. DND, "Canada Wings, Aviation Training Center, Quick Reference: Bell 412 CF." Formerly available at http://www.airtraining.forces.gc.ca/training/fmt/canadawings_bell412cf_e.asp. (accessed April 20, 2009. Link no longer active).

49. Stephen J. Tourville, et al, *An Assessment Methodology For Team Coordination In Combat Mission Training*, Report prepared for the United States Air Force Armstrong Laboratory (Mesa, Arizona: July 1997): 1, 16. Available online at http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA327932&Location=U2&doc=GetTRDoc.pdf (accessed February 26, 2009).

50. "Move, shoot, communicate" skills relate to the ability for a soldier to find cover, accurately fire their weapon, and communicate internal and external to their crew. This concept is covered in the 160th SOAR(A) Green Platoon Phase Two training. If the aircrew are shot down, they are not expected to become assaulters. They are expected, however, not to be a liability to their own forces on the ground. In terms of ground combat skills, aircrew must be compatible with friendly forces, not comparable. In some cases the crew may have to fight their way to friendly forces or to positions to await extraction.

51. Dennis J. Reimer, "Training: Our army's top priority and don't you forget it," *Military Review* 76, no. 4 (July/August 1996): 55-62.

52. The Complete Works of George Orwell, "George Orwell Quotes." Available online at http://www.george-orwell.org/l_quotes.html (accessed January 30, 2009).

53. DND, "CANSOFCOM Key Tenets." Available online at http://www.cansofcom.forces.gc.ca/gi-ig/ckt-dcc-eng.asp (accessed April 26, 2009).

54. DND, *Canadian Special Operations Forces Command: An Overview*, 3. Bolded emphasis added.

THE GREAT EAGLE ALBATROSS CONTROVERSY

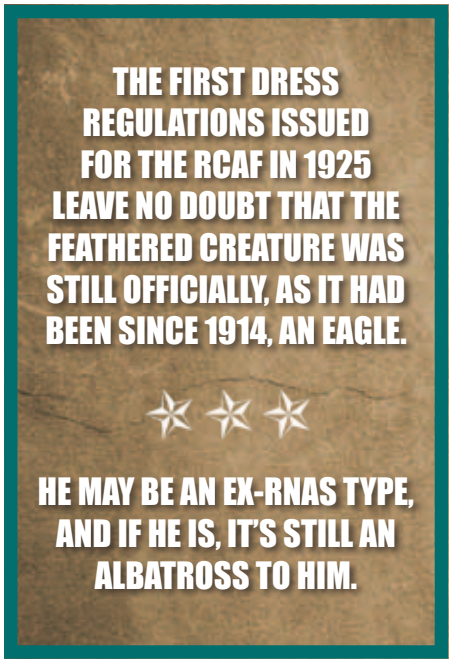
BY WING COMMANDER F. H. HITCHINS, AIR HISTORIAN

REPRINT FROM *The Roundel* VOL. 2, 1950, PP. 13-14

Composite by CFAWC

Time was, say the oldsters, when a simple statement in a Service Mess about the bird that appears on RCAF [Royal Canadian Air Force] buttons and badges was sure to start an argument that would last far into the night.

This once-burning issue about the bird's true identity has all but flickered out, and (it is hoped) new members of the Force are correctly "indoctrinated" that the bird is an eagle. Mention that to a veteran wearing First World War ribbons, however, and you run a risk of becoming involved. If he flew in the Old Royal Naval Air Service [RNAS] (and three of our four Chiefs of the Air Staff did), a gleam will come into his eye and he will begin convincing you. By the third round you will find yourself tactfully agreeing that it isn't an eagle at all, but—as any clot can plainly see—an albatross.



Actually the controversy was settled—officially—long before it even began, and, for the benefit of those who have endured, or have yet to face, the argument, here are the facts.

It all started in the summer of 1914 when the Board of Admiralty took it upon itself, in defiance of Cabinet orders issued two years earlier, to rename the Naval Wing of the Royal Flying Corps [RFC] as the Royal Naval Air Service, and issued regulations for the organization, rank titles and uniform of the Service. These regulations of 23 June, 1914, clearly stated that officers of the RNAS would wear an eagle on the left sleeve above the rank lace. An eagle was also substituted for the anchor on buttons, cap badges, and other insignia. According to tradition, the Lords Commissioners of the Admiralty adopted the eagle design (outstretched wings with head inclined to the right) from a brooch which the wife of a naval officer had purchased in Paris. So, from the very moment it was hatched, the bird was an *eagle*.

But, as many will tell you, regulations are meant to be printed, not heeded. It may be that the outbreak of war a few weeks later caused the details of the regulations to be overlooked or forgotten—or read in true Nelson fashion with telescope to the blind eye. Or maybe the Navy fliers decided that the eagle, a land bird, had no place in a naval service. At any rate, before long the members of the RNAS considered as high treason any suggestion that their bird was other than a proper seagoing albatross.

Then, in 1918, the RFC and RNAS were merged into the Royal Air Force [RAF], and the new Air Force took over the RNAS rank insignia—and the bird. Quite naturally, ex-RNAS members carried with them into the RAF their unswerving loyalty to the albatross, although there is nothing to show that the RAF ever regarded it—officially—as anything but an eagle.

When the CAF [Canadian Air Force] was formed in Canada in 1920 it carefully sidestepped the issue by adopting a uniform with army rank badges and insignia that contained wings but no bird. When the RCAF emerged in 1924, however, it adopted the RAF style uniform with all its appurtenances, including the bird. The first dress regulations issued for the RCAF in 1925 leave no doubt that the feathered creature was still officially, as it had been since 1914, an *eagle*.

Many of the RCAF's early personnel were veterans who had flown with the RNAS and, true to the traditions of the "Silent Service,"

they eloquently and persuasively spread the myth that the bird worn by the RCAF was really an albatross. The argument smouldered for years, mostly in the messes, although occasionally someone actually sat down to write a memo about it.

When the Second World War came along, the controversy flared up again. Thousands of wartime recruits were told that the bird they wore on their shoulders and brass buttons was an albatross. Thousands more were told that it was an eagle. To others it was simply a bird, although one officer irreverently suggested it was a pregnant duck. Of course, no one bothered to consult the regulations.

The controversy should have been settled, once and for all, in January 1943. Ever since 1924 the RCAF had been using as its "official" badge the badge of the RAF, modified by the addition of a scroll bearing the words "Royal Canadian Air Force." After 18 years of use it was, somewhat belatedly, discovered that this RCAF badge had never been officially approved or sanctioned. The Chester Herald, who had been appointed Inspector of RCAF Badges, accordingly prepared a proper design, improving upon the 1924 version, and in January 1943 this general badge of the RCAF was approved by H. M. the King. The Chester Herald's description of the badge clearly and specifically refers to the bird in the design as "an eagle volant affronté, the head lowered and to the sinister." In short, it was still an eagle and always had been—although the albatross was a very nice bird, too. Nevertheless, rumblings of the controversy were still heard until the end of the war.

Today, former members of the RNAS are so few in the RCAF that there is little they can do about it except mutter in their beer. But even so, if the subject should ever come up and there's an old veteran about, be careful. **He may be an ex-RNAS type, and if he is, it's still an albatross to him.** ■

THE ROLE OF THE CHIEF WARRANT OFFICER WITHIN OPERATIONAL ART

BY CHIEF WARRANT OFFICER KEVIN WEST

ONE LEVEL OF ROMAN *PRINCIPALES* WAS THE ***AQUILIFER***, WHICH WAS AN EXTREMELY PRESTIGIOUS POST, ACTING AS AN ADVISER TO THE GENERAL

Composite by CFAWC

Rapid changes in technology and its employment have brought into question the roles of military personnel. These complexities have created a grey area around the traditional lines separating the role of the officer and non-commissioned member (NCM) within the Canadian Forces (CF). This is especially true at the senior leadership levels where the role of CF leaders has had to transform to meet the needs of the institution now operating in a new technology-dominated battlespace. Of all the senior leadership ranks of the CF, the chief warrant officer (CWO) / chief petty officer 1st class (CPO 1) has evolved the most.

This article will examine the evolution of the role of the NCM, focusing on the CWO / CPO 1. It will provide historical background, review the present day functions and responsibilities, and discuss what may be expected of the chiefs of the future. It will also explore the present-day strategies in the professional development of CWOs for these future roles. Supported by information provided by serving and retired senior officers and CWOs, this article will seek to determine if the chief has a role within the specifics of the operational art.

The role of what the CF calls the chief dates back for many centuries. Douglas Bland, associate professor and chair of Defence Management Studies at Queen's University, explains the division of labour within a military and the function of each division as follows:

> Labour in armies over the centuries has been divided between common soldiers, under-officers, and officers…. Soldiers in masses provide the fighting edge, under-officers provide the stern discipline that holds the line, and officers formulate plans and position troops for combat.[1]

The Roman *principales*[2] as described by David Breeze, an honorary professor at the universities of Durham, Edinburgh and Newcastle, and chairman of the International Congress of Roman Frontier Studies, would be equivalent to the modern day non-commissioned officer (NCO).[3] One level of *principales* was the *aquilifer*, which was an extremely prestigious post, acting as an adviser to the general.[4] In the 16th century the British Army first instituted the rank of sergeant major, whose responsibilities were to supervise the activities of the sergeants. The sergeant major was considered an officer, not an NCO.[5] Through modern times, the role of the senior leaders within the non-commissioned corps has been to train, discipline the lower ranks and at times assist in the development of the junior officers. There are very few definitions of the role of the CWO found within the Canadian military even today. *The Guide: A Manual for the Canadian Militia* published in 1880 by then Colonel (later Major-General) Otter states the requisites of a good NCO were "sobriety, activity and zeal."[6] Dr. Ronald Haycock, Dean of Arts at the Royal Military College of Canada, wrote that Otter also felt that "the NCO was the upholder of discipline, sound management and communications as well as tradition and ethos…. Otter also believed in a competent, morally sound, literate, wise and knowledgeable NCO who could make decisions responsibly, write orders clearly and do administration well."[7]

OF ALL THE SENIOR LEADERSHIP RANKS OF THE CF, THE CHIEF WARRANT OFFICER (CWO) / CHIEF PETTY OFFICER 1ST CLASS (CPO 1) HAS EVOLVED THE MOST.

The definition by Otter closely represents the chief of today. What the Canadian military must consider is if this is the desired role. Much has changed within the world that has affected the CF and the roles of its members. The lightning speed at which technology has evolved has had a great impact on the jobs performed by military members. The changes in society that occur over time also cannot be ignored. An example of not representing the values of society occurred in 1993 in Somalia. The incident involved the brutal beating of a Somali who had infiltrated the Canadian camp; the

captors eventually beat their prisoner to death.[8] Following this incident an inquiry was conducted to determine what had gone wrong within the CF for such a deplorable event to occur.[9] A number of issues were raised regarding the ethics and values of the CF. It was recognized that the forces needed to meet the needs of society in order to maintain legitimacy. In 2003, thw official Canadian professional military doctrine was published. *Duty with Honour: The Profession of Arms in Canada* identifies what is expected of members within the profession and what the Canadian public expects of its forces:

> Incorporated in the military ethos, Canadian values mandate members of the Canadian profession of arms to perform their tasks with humanity.… Performing with humanity contributes to the honour earned by Canadian Forces members and helps make Canadians at home proud and supportive of their armed forces.[10]

These values and expectations state how the military must behave; it must now ensure these values are understood and instilled in its troops through education and knowledge.

The differences between the officer corps and NCM corps have changed little over the years with respect to authority. "Through their commission, officers are given particular authority and responsibility for decisions on the use of force. These decisions, from the tactical through to the strategic level, set the context within which the NCMs carry out operations."[11] This identifies the officer as the commander and the NCM as the executer of tasks. The main difference when discussing both corps at the senior leadership level is experience. When NCMs reach the rank of chief they have accumulated a great deal of experience with vast expertise, whereas captains or majors will normally have spent less time in operations due to less time served in the forces. The experience the chief brings to the battlespace is invaluable. This is supported in *Duty with Honour:*

> Overseeing the regulatory functions that operate throughout the profession is a major responsibility of the Officer Corps…Only by drawing extensively on the particular expertise of the NCM Corps can officers lead the force effectively and efficiently.[12]

The CF is at a crossroads regarding the role of the CWO. In 2003, after the recommendations from the Somalia inquiry, the CF published *The Canadian Forces Non-Commissioned Member of the 21st Century.*[13] This document states eight strategic objectives and six key initiatives needed for the military to prepare its NCMs for the future.[14] For the military to meet the future developmental needs of its chiefs, strategic objective number three (a knowledgeable NCM corps) and strategic objective number five (integral members of a strong officer / NCM team) are critical to success in the future.[15] The document states that for NCMs to evolve and meet the challenges of the future, certain activities must occur.[16]

The intent of this article is to identify if there is a role for the CWO within operational art. To understand operational art, war must be understood. Carl von Clausewitz, soldier and author of *On War*, who is considered the author of military strategy by many of the world's armed forces, states "War is merely the continuation of policy by other means."[17] The CF elaborated on this dictum by stating that "the military response to conflict must be consistent with national policy objectives. The translation of policy goals into military action must be done in a manner which ensures clarity and preserves unity of effort."[18] Therefore, there is a need for those involved in war to understand the reasoning behind it if a military is to achieve its objectives.

The actual conduct of battle in war is relatively simple, it has but one aim, render the opponent powerless to resist. Howard and Paret define war as follows: "War is thus an act of force to compel our enemy to do our will."[19] The total concept of war is much more complex, as it encompasses not just the battles but also the strategic objective desired. For these reasons war, or conflict, the term used in Canadian doctrine, is broken down into the three levels: strategic, operational and tactical.[20] These levels spell out the links and differences from the overall objective to the actions taken to attain the objective.

As this article focuses on Canadian philosophies and the operational art, their definition of levels of conflict[21] focusing on operational and tactical will be used:

> The *operational level* of conflict is the level at which campaigns and major operations are planned, conducted and sustained to accomplish strategic objectives.… Activities at this level link tactics and strategy by establishing operational objectives … and provide the means by which tactical successes are exploited to achieve strategic objectives….
>
> The operational level is not defined by the number and size of forces or the echelon of headquarters involved. In a large-scale conflict, a corps may be the lowest level of operational command.…
>
> The *tactical level* of conflict is the level at which battles and engagements are planned and executed to accomplish military objectives assigned to tactical units.…[22]

Canadian definitions, although quite similar to those of the United States (US), differ somewhat.[23] The Canadian versions cover not only the military aspect but also include other instruments of power and capabilities such as political, economical, scientific and technological in order to achieve its objectives. The US definition concentrates solely on military forces.

The operational art is also defined differently between the US and Canada. Canadian doctrine defines operational art as "the skill of employing military forces to attain strategic objectives in a theatre of war or theatre of operations through the design, organization and conduct of campaigns and major operations."[24] In the book *The Operational Art: Canadian Perspectives – Context and Concepts*, a leading academic at Queen's University, Dr. Allan English, refers to operational art as:

> the skill of translating this strategic direction into operational and tactical action. It is not dependant [sic] on the size of the committed forces, but is the vital link between the setting of military strategic objectives and the tactical employment of forces on the battlefield....[25]

English states the most compelling difference between the Canadian definition and that of the US is "operational level is not defined by the size and number of forces involved, but on the outcome of an action, and that no specific level of command is solely concerned with the operational art."[26]

CANADIAN DOCTRINE DEFINES OPERATIONAL ART AS "THE SKILL OF EMPLOYING MILITARY FORCES TO ATTAIN STRATEGIC OBJECTIVES IN A THEATRE OF WAR OR THEATRE OF OPERATIONS THROUGH THE DESIGN, ORGANIZATION AND CONDUCT OF CAMPAIGNS AND MAJOR OPERATIONS."

The CF must define what functions it wants its chiefs to undertake within this art. Presently within the CF there is the command team concept, which also lacks a clear definition. In current CF lexicon, the command team is often described as comprising the commander and the most senior NCM, usually a chief at the unit level or above. For this discussion it will be considered that the senior NCM is a CWO. The chief is considered one of the closest advisers to the commander. Chiefs will mainly lead people and then move into roles leading the institution as they progress to command level positions. Those on the officer career track spend less time leading people, as their command roles carry them more rapidly to the institutional leadership realm. As CWOs will have enormous experience in dealing with people, they will bring a different view based on this experience and leadership. The commander and the chief complement one another. Both members of this team look at issues and problems from different angles, thus enabling a more in-depth analysis creating more effective decisions.

As operational art is the link between strategic objectives and the tactical actions needed to achieve these objectives, the military must determine if they desire to have the CWO play a direct role in the planning and designing phases of this art. If the chief is considered one of the closest confidants of the commander, can they also be used as a staff officer within the planning and design team? Lieutenant-General Michel Maisonneuve (Retired), former Chief of Staff of Allied Command Transformation, believed that the chief as an adviser to the command team must understand the operational art:

> If we expect the CWO to support the General or Flag Officer (GFO) in his/her responsibilities, we need to give them the basic understanding. Similarly, operational art will have an impact on the Non-Commissioned Members within a command…The adviser of the command team must have a role to play….[27]

If the chief becomes part of planning or design team, is there still a need for them to be advisers? Or, vice versa, if the commander needs a chief as an adviser, should the chief be part of the operational planning team?

Brigadier-General David Fraser, Commandant of the Canadian Forces College and the Commander of Task Force Afghanistan in 2006, remarked that there was a role for the chief within the operation art, as they "can provide a fresh view/opinion to the affect [sic] commander who in turn can take this input and balance the views with the objective of generating results."[28] Brigadier-General Fraser also noted, "Given this nascent operational level experience I do not believe we have prepared our CWOs for this world…. Suffice to say we rely on the NCMs own experience and moxy to learn what the officer knows in theory and struggles to apply in reality."[29] This brings to light a concern that possibly the CF has not been preparing its chiefs for the future.

CWO Michael McDonald, Land Forces Training and Doctrine System CWO and former Task Force Afghanistan CWO in 2006 saw it this way:

> I do believe that the CWO has a role in operational art. Although at the strategic level you are not directly involved with the soldiers within the units (sections, platoons, companies and even battalions) your advice to the commander may have effects that will indirectly touch the troops. The command team approach allows soldiers to feel that they are being represented at all levels and not necessarily only at their unit.[30]

McDonald believed the importance of the chief to the command team is as an adviser. Although not directly involved in the operational art planning or designing, he has input to the commander that will concern the troops throughout the force. McDonald also mentioned that the chief at the higher operational and strategic level headquarters is advising on policy that will affect all NCMs as opposed to a single unit.[31]

Colonel Howard Coombs, the Director Joint Command and Staff Program (DL) at Canadian Forces College, agreed that the CWO has a role:

> The formulation of campaign plans has, in my opinion, two components—art and design. The former is intuitive; while the latter is systemic or mechanical…. The sequencing of decisive points along selected lines of operations is an intuitive act ideally accomplished by a commander in conjunction with his/her key staff. The Force Chief Warrant Officer or equivalent should be part of that team to provide input based on experience and developed intuition which has been gathered by performing the types of missions and tasks that will fall out of the conditions needed at individual or groups of decisive points.[32]

Coombs displayed the same concerns regarding the education of the CWO: "The shortcoming in DP3/DP4 [Development Period] education for NCMs is that they do not receive enough education in these conceptual processes and therefore are disadvantaged when asked to provide input into the planning process."[33]

The former CF CWO, Mr. Daniel Gilbert, was the only person surveyed who based his response on the definition of operational art. He made a very interesting observation that a chief would have little involvement in the operational art within the limits of the battlefield. Although if operational art is considered as the bridge between strategy and tactics, then the chief could have a large role, but it needs to be determined what that may be. He also made reference that commanders have been trained for many years to develop this area and not many are involved.[34] Gilbert's line of reasoning is valid in that the CF has been preparing the officer corps for many years in the Operational Art, but very few have ever had the opportunity to practice it.

CWO Dano Dietrich, Command CWO of the Canadian Expeditionary Force Command, stated "the principal value that I bring to the Op Art [sic] field is the same that all CWOs/CPO 1s bring, regardless of their respective positions: in one word, communication.… As a communicator I must be able to answer questions and reinforce desired behaviour … I must understand it. I would argue that strategic level studies are not a 'nice to have,' but rather a 'must' at our level."[35] He goes on to reinforce the issue of a chief having to have this knowledge by saying that the education process needs to begin at lower rank levels.

This survey has proven that there is a belief that chiefs have a role within the operational art. One main issue of concern is the lack of training and education in the art itself. None stated that these most senior NCMs do not have the capability of being involved; to the contrary, most strongly believe that their experience and strong leadership naturally gives them a role.

What the Canadian military needs to be concerned about is the universal agreement that they are not preparing their chiefs for the roles expected in the future. The Non-Commissioned Member Professional Development Centre (NCMPDC) needs to continue to evolve its programs in order to meet needs of the Canadian military based on what the organization wants the role of the chief to be. The NCMPDC has established within its programs an introduction into the operational art. This will provide CWOs a base, enabling them to understand the language and processes within the art. It will not, however, prepare them to assume jobs as planners or designers. If this is desired, more education in this field will be required.

Does the military still need the chief in the role of custodian of the NCM corps and guardian of its customs and traditions, or does it need them to function more in the role of a staff officer? If the CF judges the need as being for a staff officer, the next question must be, is there a need for chiefs or should they become members of the commissioned officer corps? In closing, the CF has one of the most professional and respected non-commissioned corps in the world. As positive as this is to the CF, this may also be the reason that the line between the officer and CWO is difficult to distinguish at times. To some, it may seem that drastic statements were made in this article, but without clear definitions of roles and organizational requirements for the future, a grey area will continue to exist between the two corps.

APPENDIX A

A survey was conducted of various serving and retired senior officers and CWOs who have served at the operational command level and higher. The intent of this survey was to acquire the feeling of what high-ranking members of the CF believe the role of the CWO is within the operational art. The general consensus among all of the senior officers was that the chief could play a role, although they required more exposure and knowledge within the art. One CWO believed there could be a role, although it is dependent on what Canada will accept as a definition of operational art.

The following is the question that was posed, accompanied by extracts from the responses of those surveyed:

DO YOU VIEW THE CHIEF WARRANT OFFICER HAVING A ROLE IN OPERATION ART?

LIEUTENANT-GENERAL MICHEL MAISONNEUVE (RETIRED), FORMER CHIEF OF STAFF, ALLIED COMMAND TRANFORMATION HEADQUARTERS, NORFOLK, VIRGINIA:

As an adviser within the command team, does the CWO need to know and understand the operational art. Of course. If we expect the CWO to support the General or Flag Officer (GFO) in his/her responsibilities, we need to give them the basic understanding. Similarly, operational art will have an impact on the non-commissioned members within a command. Today we speak of "effects" on the ground, and we plan on the basis of these effects. The adviser of the command team must have a role to play in considering the effects required and how to achieve them. Plans will be developed in consultation.

BRIGADIER-GENERAL DAVID FRASER, COMMANDANT CANADIAN FORCES COLLEGE AND FORMER COMMANDER OF TASK FORCE AFGHANISTAN:

Given this nascent operational level experience I do not believe we have prepared our CWOs for this world. The officers are grasping to understand and do this so you can figure that the NCMs are way behind. I will not discuss the lack of harmonization between the NCM and offr [officer] education (DPs) [development periods] programmes and the poor understanding between education and training. Suffice to say we rely on the NCM's own experience and moxy to learn what the officer knows in theory and struggles to apply in reality.

Having said this, I believe that the NCM can provide a fresh view/opinion to the affect [sic] commander who in turn can take this input and balance the views with the objective of generating results. NCMs represent a part of the organization that has different edcn [education] and trg [training] foundations and experiences. These differences can add to the understanding of the situation and provide a great breadth and depth of advice to the commander. What we need to do is provide the NCM the theoretical foundations to compliment [sic] the experiential foundation in order to serve the commander and operational concerns.

So what? We need to teach NCMs the strategic and operational theory. With this foundation the NCM will be able to connect the dots in a more effective manner serving the needs of the commander and represent the opinions and needs of soldiers.

CHIEF WARRANT OFFICER MICHAEL MCDONALD, LAND FORCES DOCTRINE AND TRAINING SYSTEM CWO, AND FORMER TASK FORCE AFGHANISTAN CWO WITH BGEN FRASER:

I do believe that the CWO has a role in operational art. Although at the strategic level you are not directly involved with the soldiers within the units (sections, platoons, companies and even battalions) your advice to the commander may have effects that will indirectly touch the troops. The command team approach allows soldiers to feel that they are being represented at all levels and not necessarily

only at their unit. As the TFA [Task Force Afghanistan] CWO, I would accompany the commander on all his visits to the field units for a number of reasons.
First and foremost to show the soldiers that they did have an NCM representing them at the Bde/Div [brigade/division] level who they would feel more comfortable talking to. Although, as you know Generals are just people like us, most soldiers have a hard time speaking to them, but will have no issues talking to one of their own (CWO). It also shows that we are all able to share in their hardships (especially in Afgh [Afghanistan]).

The CWO of the future will have a greater role to play at these levels as opposed [to simply being] a representative of the NCMs. The CWO at the Bn/Regt [battalion/regiment] level is directly involved in the day to day running of a unit in regards to the welfare of the soldiers, etc., whereas the higher formation CWO is indirectly involved by [inputting] ideas, sitting on boards, counsels, etc., to help to change/amend policies that will affect the soldiers at a different level (national policies, etc.). The bottom line is the CWO at all levels is there for the soldiers, but he generally brings a different perspective to the table than the Sr [senior] Officers.

CWOs at all levels are basically doing the same thing (taking care of the troops) and advising commanders on courses of action that are based on common sense, experience, and with the welfare of the soldiers in mind. At the higher levels you are advising on policy changes, etc. that will affect all NCMs as opposed to a single unit, but with the same endstate [sic] in mind. I do believe there is a requirement to have these sr [senior] level CWOs, as most nations are quite jealous of the command team approach that Canada has.

CHIEF WARRANT OFFICER DANIEL GILBERT (RETIRED),
FORMER CANADIAN FORCES CWO:

Based on this definition, which limits operational art to the battlefield, I would say that CWO in the combat arms may be involved. However, if the definition is broader, the implication of CWO could also be broader. Here is what I found on CF joint force command [JFC] and operational art:

"Operational art is the use of military forces to *achieve strategic goals through the design, organization, integration, and conduct of strategies*, [original emphasis] campaigns, major operations, and battles.

Operational art helps commanders use *resources efficiently and effectively to achieve strategic objectives [original emphasis]*. Without operational art, war would be a set of disconnected engagements, with relative attrition the only measure of success or failure. Operational art requires *broad vision, the ability to anticipate, and effective joint and multinational cooperation* [original emphasis]. Operational art is practiced not only by JFCs [joint force commanders], but also by their senior staff officers and subordinate commanders.

Outgoing Air Command Chief Warrant Officer, CCWO Daniel Gilbert

Photo: Warrant Officer Serge Peters

Joint operational art looks not only at the employment of military forces but also at the arrangement of their efforts in time, space, and purpose. Joint operational art focuses in particular on the fundamental methods and issues associated with the synchronization of air, land, sea, space, and special operations forces.

Among many considerations, operational art requires commanders to answer the following questions: What military (or related political and social) conditions must be produced in the operational area to achieve the strategic goal? (Ends); What sequence of actions is most likely to produce that condition? (Ways); How should the resources of the joint force be applied to accomplish that sequence of actions? (Means); and what is the likely cost or risk to the joint force in performing that sequence of actions?

Operational art is characterized by the following fundamental elements: Synergy, simultaneity and depth, anticipation, balance, leverage, timing and tempo, operational reach and approach, forces and functions, arranging operations, centers of gravity, direct vs. indirect approach, decisive points, culmination and, finally, termination."

(US Joint Publication 3-0, *US Joint Operations* Chapter II, para 2c and JP 3-0, Chapter III, para 5)

If this is the way we look at operational art then it could apply to more than just the battlefield. We could be, and are as CWO, more involved in operational art when it applies to achieving strategic goals that are not connected to the battlefield. A good example is the current transformation efforts, which are guided by the same principles [as] operational art.

So before you can make a compelling argument that CWO should be involved in operational art, you need to define the left and right of arc! Operational art, if limited to the battlefield, is a very limited field. Commanders have been trained for many years to develop this art (Command and Staff college, AMSC, NMSC, NATO war college, etc.) and not many are involved. However, if we look at operational art as the bridge between strategy and tactics (not limited to the battlefield), then the CWO have a huge role to play. You need to find out if the term operational art is limited to the battlefield, and if it is, you need to make an argument that it should not be as the principles (*achieve strategic goals through the design, organization, integration, and conduct of strategies) [original emphasis]* should not be limited to the battlefield.

COLONEL HOWARD COOMBS,
DIRECTOR JOINT COMMAND AND STAFF PROGRAM (DISTANCE LEARNING):

Yes—certainly. The formulation of campaign plans has, in my opinion, two components: art and design. The former is intuitive, while the latter is systemic or mechanical. If you look at the attachment operational plans based on this current COMISAF [Commander International Security Assistance Force] direction can be laid out mechanically using the doctrinal elements of campaign design; however, the sequencing of decisive points along selected lines of operations is an intuitive act ideally accomplished by a commander in conjunction with his/her key staff. The Force Chief Warrant Officer or equivalent should be part of that team to provide input based on experience and developed intuition which has been gathered by performing the types of missions and tasks that will fall out of the conditions needed at individual or groups of decisive points. The shortcoming in DP3/DP4 education for NCMs is that they do not receive enough education in these conceptual processes and therefore are disadvantaged when asked to provide input into the planning process.

CHIEF WARRANT OFFICER DANO DIETRICH,
COMMAND CWO CANADIAN EXPEDITIONARY FORCES COMMAND:

The essence of your question is do I believe that I have a role in Op Art [sic]? Or perhaps better put, does my boss believe I have such a role? And if so, should CWOs/CPO 1s receive better formations prior to taking on such

positions? The principal value that I bring to the Op Art field is the same that all CWOs/CPO 1s bring, regardless of their respective positions: in one word, communication. Soldiers, Sailors, Airman [sic] and Airwomen today have very good knowledge of the mission and ask very relevant questions about mission focus and government intent. In a place like the Kandahar Provincial Reconstruction Team (KPRT), very junior military members work side-by-side with WoG [whole-of-government] partners. This interaction provides both sides with new knowledge about National intent and about how all partners are working towards a similar goal. As a communicator I must be able to answer questions and reinforce desired behaviour. Therefore to disseminate and explain it, I must understand it. I would argue that "strategic" level studies are not a "nice to have" but rather a "must" at our level. In fact I think a case could be made that you want to begin the education process at the WO/PO 1 [warrant officer / petty officer 1st class] level.

Although we often use the term "command team," I'm not naive enough to believe that I have a great deal to do with ultimate decisions, but if I am to act as an adviser and confidant, I must be in my Comd's [commander's] head space. ■

Kevin West is the 8 Wing / Canadian Forces Base Trenton Chief Warrant Officer (WCWO). He has served in the Canadian Forces for 25 years in numerous positions across the country. He has a keen interest in military history and enjoys studying and teaching leadership theories, military culture and the ideologies of the profession of arms.

List of Abbreviations

CF	Canadian Forces
CPO 1	chief petty officer, 1st class
CWO	chief warrant officer
JFC	joint force command
KPRT	Kandahar Provincial Reconstruction Team
NCM	non-commissioned member
NCO	non-commissioned officer
NCMPDC	Non-Commissioned Member Professional Development Centre
US	United States

Notes

1. Douglas L. Bland, ed., *Backbone of the Army: Non-Commissioned Officers in the Future Army* (Kingston: McGill-Queen's University Press, 2000), ix.

2. David Breeze, "Pay Grades and Ranks below the Centurionate," *The Journal of Roman Studies* 61 (1971): 130-35.

3. The term non-commissioned officer (NCO) is a term that is often misused. In the Canadian Forces the NCO is used for the ranks of corporal to sergeant in accordance with the Queen's Regulations and Orders. Many books and papers relate the NCO term to all non-commissioned personnel. Although inaccurate, many identify NCOs in this manner.

4. Organization of the Roman Imperial Legion, available online at http://www.unrv.com/military/legion.php (accessed April 2, 2009).

5. Sir Chas. Oman, *A History of the Arts of War in the Sixteenth Century* (Wiltshire: Anthony Rowe Ltd, 1987), 378, and Bland, 13.

6. Sir William Dillon Otter, *The Guide: A Manual for the Canadian Militia,* 9th ed. (Toronto: Copp, Clark Company, 1914), 20.

7. Ronald G. Haycock, "The Stuff of Armies: the NCO Throughout History," in *Backbone of the Army: Non-Commissioned Officers in the Future Army,* ed. Douglas L. Bland (Kingston: McGill-Queen's University Press, 2000), 19.

8. David J. Bercuson, "Up from the Ashes: the Re-Professionalization of the Canadian Forces after the Somalia Affair," *Canadian Military Journal,* 9, no.3, (2009): 31.

9. Government of Canada, *Report to the Prime Minister*, March 1997. This report published by Defence Minister Doug Young made reference to the failures in leadership that had occurred and recommendations to reform the Canadian Forces.

10. Government of Canada, Department of National Defence (DND), *Duty with Honour: the Profession of Arms in Canada* (Kingston: Canadian Defence Academy, 2003), 28–29.

11. Ibid., 15.

12. Ibid.

13. Government of Canada, DND, *The Canadian Forces Non-Commissioned Member in the 21st Century: Detailed Analysis and Strategy for Launching Implementation,* (2002) This document provides the strategic guidance for the professional development of the non-commissioned members for the next 20 years. It is the product of extensive analysis of the potential challenges of the future security environment and widespread consultation on how to meet these challenges.

14. Ibid., I-28–I-29.

15. Ibid., to see all strategic objectives.

16. The importance and weight this document helped lead to the establishment of the NCMPDC on 1 April 2003 in St. Jean, Quebec. The NCMPDC has as its mandate the professional development in the subjects of leadership, management, decision-making processes and many other subjects that will prepare the NCMs, from the rank of warrant officer and above, for the future requirements of the CF.

17. Michael Howard and Peter Paret, eds., *Clausewitz: On War* (New Jersey; Princeton University Press, 1976), 87. *On War* is a compilation of writings by Carl von Clausewitz written over the period of 1816–1830. His wife published the book posthumously in 1832.

18. Government of Canada, DND, B-GG–005-004/AF-000, *Canadian Forces Operations* (Change 2,15 August 2005), 1-4.

19. Howard and Paret, 75.

20.Armed Forces of the United States, US Joint Publication 3-0, *US Joint Operations* (Change 1, 13 Feb 2008), II-1.

21. Canadian doctrine refers to levels of conflict vice levels of war. This term will be used hereafter throughout this essay.

22. *Canadian Forces Operations*, 1-4 – 1-5.

23. *US Joint Operations*, II-1 – II-3, to see the US definitions of levels of war.

24. *Canadian Forces Operations*, GL-7.

25. Allan English et al., eds., *The Operational Art: Canadian Perspectives, Context and Concepts* (Winnipeg: Canadian Defence Academy Press, 2005), 8-9.

26. *US Joint Operations*, IV-2–IV-3, to see the US definition of operational art. See also *The Operational Art*, 9.

27. Appendix A, E-mail Survey of Officers and Senior Non-Commissioned Members, LGen Maisonneuve's responses. For information purposes, extracts from the survey have been reprinted in their entirety at the end of this article.

28. Appendix A, BGen Fraser's responses.

29. Ibid.

30. Appendix A, CWO McDonald's responses.

31. Ibid.

32. Appendix A., Col Coomb's responses.

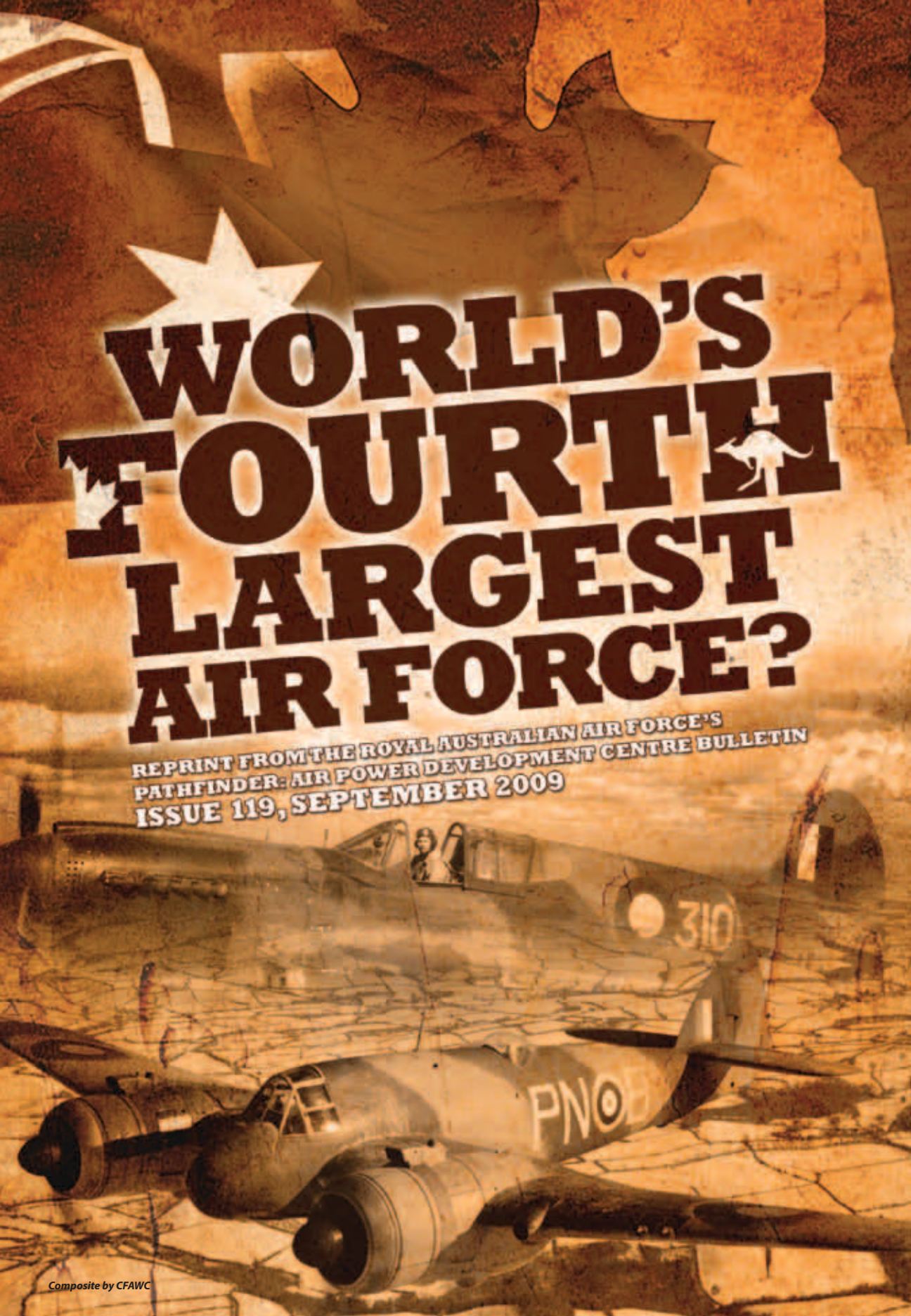
33. Ibid. DP3/DP4 describes the Developmental Periods that founded the Canadian Forces Professional Development System. In this case DP3/DP4 is the period for the ranks of warrant officer, master warrant officer and chief warrant officer.

34. Appendix A. CWO Gilbert (Ret'd) responses.

35. Appendix A. CWO Dietrich's responses.

WORLD'S FOURTH LARGEST AIR FORCE?

REPRINT FROM THE ROYAL AUSTRALIAN AIR FORCE'S
PATHFINDER: AIR POWER DEVELOPMENT CENTRE BULLETIN
ISSUE 119, SEPTEMBER 2009



Composite by CFAWC

"With the surrender of the Axis forces in 1945 the RAAF became the fourth largest air force in the world."

Frank Doak,
Royal Australian Air Force - A Brief History (1981)

Since at least the early 1980s, the claim has been made that, at the end of World War II, Australia was the country with 'the fourth largest air force in the world'. The same claim has been made by Canada, so is the Australian claim historically valid or is it just an example of journalistic licence?

With the surrender of Germany on 8 May 1945, followed by the surrender of Japan on 15 August, there is no doubting that the three great air powers remaining in the world were the United States, the Soviet Union and Britain—in that order.

Kittyhawks at Oakey, Qld – some of the 5000 surplus RAAF aircraft in 1946

The US Army Air Forces (USAAF) had 2 253 000 people operating 63 715 aircraft, even without counting the air arms of the US Navy and Marine Corps. The size and strength of the latter can be appreciated from the fact that the US Navy was training 20 000 pilots annually in 1943-44, and in March 1946 established a program to place into storage 6000 of the aircraft it was then operating.

Reliable data on the Russian Air Force (VVS) is scarce, but with an estimated 18 500 aircraft, it was second only to the USAAF in size. The Royal Air Force came next with 1 079 835 men and women operating 9200 frontline aircraft alone.

What do the RAAF [Royal Australian Air Force] figures disclose about its size and shape at this stage? On 29 August 1945, a fortnight after the war against Japan ended, the RAAF had 173 622 personnel personnel [*sic*] operating 5585 aircraft. A majority, almost 132 000 (including the 17 243 women in the WAAAF [Women's Auxiliary Australian Air Force]), were serving in the Pacific. That theatre was also the focus for all but 20 of the RAAF's 75 flying squadrons.

This represented a fifty-fold expansion over the size of the air service which Australia had maintained at the start of World War II. In September 1939, the RAAF had 3489 officers and airmen in uniform, manning 12 flying squadrons with a total of 246 aircraft—164 of them operational (though obsolescent) types. It was even then in the midst of an expansion program intended to see it grow to 18 operational squadrons and 5000 personnel by mid-1941.

It is significant that the end of the war did not actually find RAAF at its peak. That point had been reached a year earlier, in August 1944, when the number of personnel stood at 182 000. In that month, however, the Australian War Cabinet directed that 15 000 men were to be released by the RAAF to meet the manpower needs of civil industry. From this stage, while the number of operational squadrons continued to increase, the total number of personnel in the RAAF declined.

The story of the Royal Canadian Air Force (RCAF) is remarkably similar. From a strength in September 1939 of around a dozen squadrons, both permanent and auxiliary, and a plan to expand its full-time personnel strength to 5025 officers and airmen, the RCAF grew to 215 200 men and women filling 78 flying squadrons. It is therefore incontestable, then, that Canada had the fourth largest allied air force during the course of the war.

The crucial point of difference is that the RCAF hit its peak in January 1944. Moreover, because Europe was the focus of Canada's contribution to the allied war effort—it had 48 of its squadrons in that theatre in May 1945—as soon as Germany's defeat was imminent, the need to keep it at such levels diminished. By 31 May 1945, the RCAF had already shrunk

to 164 846, and by the time of the Japanese surrender the Service was rapidly reducing towards a figure of 16 000 that the Canadian government had decided upon as the RCAF's demobilisation target.

On that basis, the RAAF claim to have been fourth largest at the point when hostilities in all theatres had ceased is also correct. This was largely due to the fact that the RCAF was reducing faster than the RAAF, but anyway it was not a distinction that the RAAF kept for very long.

Like Canada, Australia also accelerated its demobilisation plans for the armed services, so that by the end of October 1946 the RAAF had dropped to 13 238 members. This process still had some way to go, with the post-war low for the RAAF being a strength of just 7897 reached at the end of 1948.

BCATP/EATS trainees at an airfield in Canada

A further point to be considered when looking at the relative size and strengths of the RCAF and the RAAF is that personnel numbers alone were not a true indicator of the combat air power that each service was capable of generating. This is because both Canada and Australia had become partners in what was known as the British Commonwealth Air Training Plan [BCATP] or the Empire Air Training Scheme [EATS], designed to provide a pool of trained aircrew to help maintain and expand the wartime Royal Air Force.

This was an arrangement which required both countries to maintain abnormally large training establishments, but particularly Canada because it was the main training ground for advanced training for all four partner countries under the pooling scheme. According to the Canadian War Museum, the RCAF was obliged to run nearly 100 flying schools, utilising more than 10 000 aircraft and 100 000 personnel to administer. Australia had a similar commitment to EATS, albeit on a lower scale, operating 34 flying and seven technical schools.

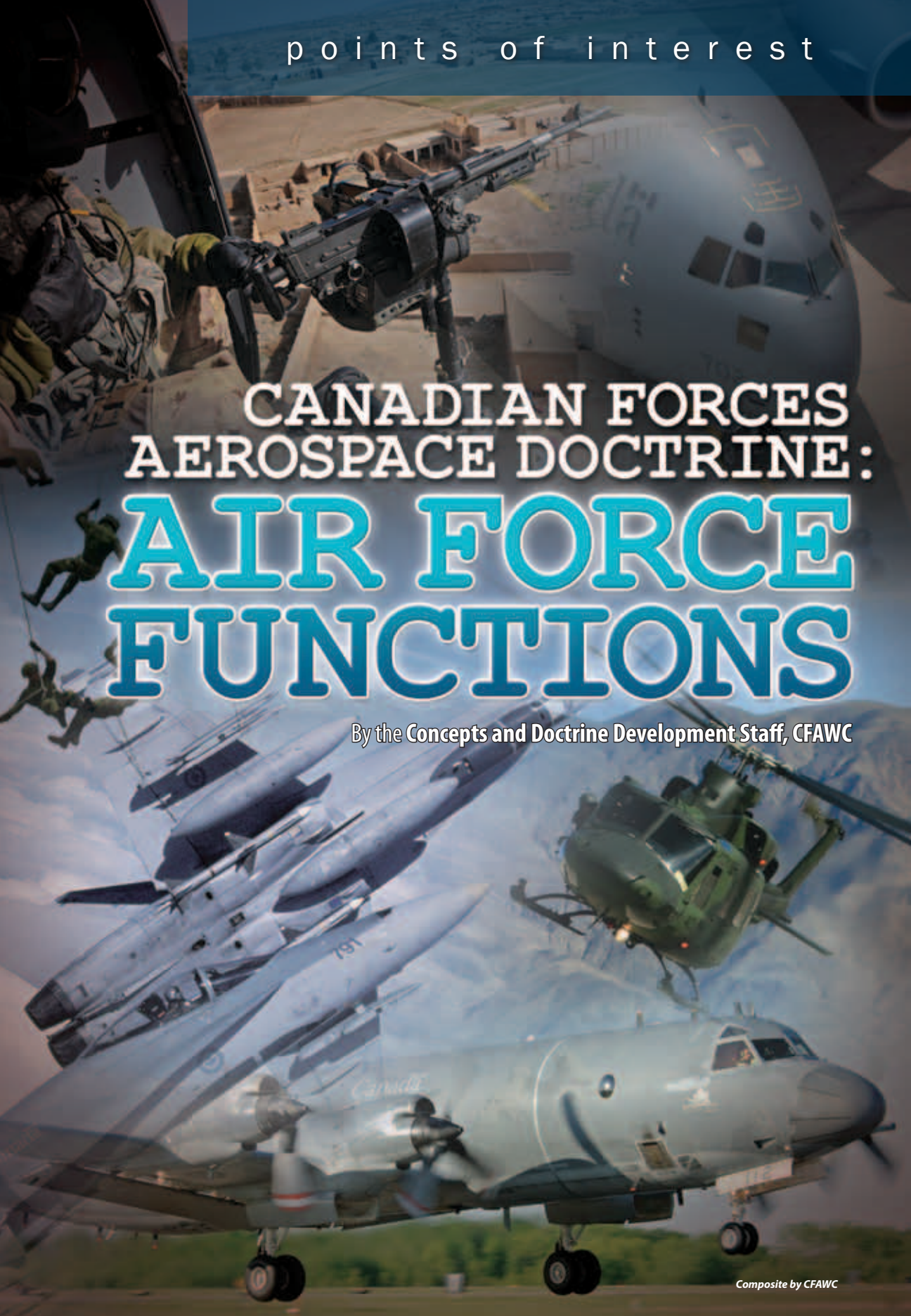
The raw numbers used in this comparison also do not reflect the fact that Australia, to a far less extent than Canada, found itself facing a constant struggle to acquire capable modern aircraft until almost the last stages of the war. For the first four years, the RAAF was obliged to make do with a large collection of mostly obsolescent and unsuitable aircraft which seriously impaired its operational effectiveness. On the other hand Canada, by virtue of its shared land border with the US, was able to establish itself as a virtual extension of the American aircraft industry and was well-placed to ensure that its needs for combat aircraft were adequately met throughout the war. To illustrate the point, production of military aircraft in Canada during the war years totalled more [than] 15 800, including types such as the Lancaster, Mosquito and Hurricane—and even the Helldiver for the US Navy.

In terms of actual combat power that the RCAF and RAAF were each capable of generating by 1945, there was probably little difference between the two services that can be usefully measured.

- At the end of World War II, the US, the Soviet Union and Britain were the three major air powers in the world.
- At its peak in1944 the Royal Canadian Air Force provided the fourth largest allied air force, but after Germany's defeat it began a process of rapid reduction.
- On Japan's surrender, the RAAF stood as the fourth largest air force in the world—but did not remain so for long.

AIR POWER DEVELOPMENT CENTRE
Level 3, 205 Anketell Street
Tuggeranong Act 2900

Ph: 02 6266 1355 Fax: 08 6266 1041
Email: airpower@defence.gov.au
Web: www.raaf.gov.au/airpower



CANADIAN FORCES AEROSPACE DOCTRINE: AIR FORCE FUNCTIONS

By the **Concepts and Doctrine Development Staff, CFAWC**

Composite by CFAWC

In 2006, the Canadian Forces Aerospace Warfare Centre (CFAWC) developed and published the first edition of the Canadian Forces Aerospace Doctrine, or as we affectionately call it, "the B-GA-400". This document articulated strategic-level guidance on how aerospace forces are best organized and employed. It also assisted in establishing priorities for procurement, and acted as a critical sounding board for testing and evaluating new concepts and policies. Most importantly, B-GA-400 ensured that the fundamental and enduring principles of aerospace power were clearly explained and understood for all to use as guidance in peace and war.

Doctrine represents knowledge gained from experience, and although it is authoritative, it requires judgement in application. But doctrine is neither rigid nor static. Doctrine evolves in response to experience, threats, and new technologies. To remain relevant, doctrine must consider these and a multitude of other factors, and it must be continuously revalidated. This is why the CFAWC team has been hard at work gathering information from lessons learned and from international forums, listening to our personnel at home and in areas of operations, and keeping our finger on the pulse of worldwide aerospace power developments during the past four years. After many hours of comparison, study, and debate, the CFAWC is ready to update the aerospace doctrine manual to better align it with Canadian Forces (CF) doctrine.

Accordingly, the second edition of the *CF Aerospace Doctrine* will soon be accessible to all members of the Air Force and to the Canadian Forces as a whole. But since it may still be a few months before Air Force personnel can sit down and enjoy a good read of their doctrine, this overview will highlight what to expect for those of you who just cannot wait!

The new *CF Aerospace Doctrine* manual, much like its first edition, recognizes that air forces exist to exercise aerospace power on behalf of the nation. It is the foundation upon which every air force activity is based. With this in mind, it became obvious that the Air Force functions needed to be reorganized to ensure interoperability with other environments within the CF. At the same time, it was important to keep in mind the unique nature of aerospace operations when reviewing the existing Air Force functions. From this stemmed a reconciliation of capabilities that are now grouped under the following six Air Force functions:

Primary Functions

Command – integrates all the operational functions into a single comprehensive strategic, operational or tactical level concept;

Sense – provides the commander with knowledge; and

Act – integrates manoeuvre, firepower, and information operations to achieve desired effects;

Enabling Functions

Shield – protects a force, its capabilities, and its freedom of action;

Sustain – regenerates and maintains capabilities in support of operations; and

Generate – develops and prepares an aerospace force to meet force employment requirements.

Figure 1 demonstrates the interconnection of the functions with one another. It is important to note that the Air Force Act function comprises the two sub-functions of Shape[1] and Move[2].

Through a century of air warfare, it has been learned that all effective air forces, whether they are large or small, are capable of performing a number of specific functions. These functions are influenced by the physical possibilities and limitations imposed by the environment and by each other. One cannot efficiently or effectively work without the other; however, it is the specific unique qualities of each function that when integrated with the others ensure the proper application of aerospace power.

Of the six functions, it is universally recognized that Command is both fundamental

Figure 1 : The interconnection of Air Force functions

and of paramount importance to the military art. Command is the over-arching and driving function. For the effective application of aerospace power, Command activities must be integrated with the activities of all other Air Force functions to ensure the effective and efficient use of all resources.

As also shown in the graphic, the CFAWC team established that in order to conduct aerospace operations and activities, the primary functions of Command, Act and Sense operate within a continuous cycle of activities. Concurrently, the outputs of the Sense activities are assessed during the Command activities to determine the current state. With this, the commander then articulates the desired state and after evaluating the current and the desired states, decides on a course of action. Command activities can then direct and plan future actions.

Once a course of action is selected, the Act activities, which include the two sub-functions of Shape and Move, implement the commander's direction in order to create effects that will achieve the desired state. Sense activities then assess the results of these effects, and the cycle is repeated as required. This cycle of activities will influence—or can be influenced by—the ongoing enabling function activities of Sustain, Shield, and Generate.

These activities must of course be performed continuously in order to effectively maintain, protect, and develop Air Force assets and capabilities. Without the Sustain, Shield, and Generate activities, the Command, Act, and Sense activities could be compromised or even eliminated. Consequently, a weakness in, or failure of one function could negatively impact not only the other five functions, but also the forces' ability to achieve the desired state.

This is in a nutshell the foundation of the revised aerospace doctrine. Now, there

is a lot more to know and understand about each aerospace function and how each of them specifically influences aerospace activities, but it is impossible in a thousand words or less to provide as much detail as the actual doctrine manual will offer. Therefore, when published later this year, every member of the Air Force is highly encouraged—from a personal and professional point of view—to take the time to read, and, more importantly, understand the second edition of the Canadian Forces Aerospace Doctrine. ■

Notes

1. Shape optimizes agile manoeuvre and integrated information operations in the application of kinetic and non-kinetic aerospace power to achieve desired effects.

2. Move exploits aerospace reach to rapidly deploy and manoeuvre personnel and materiel to achieve desired effects.

Editor's Note: One of our readers noticed that in the Fall 2009 issue of the *Journal* (Vol. 2, No 4) Aaron P. Jackson, in his article, "The Emergence of a Doctrinal Culture in The Canadian Air Force", referred to the B-GA-400 and all of its predecessors as "keystone" doctrine (ref p.36 and endnote 8). In fact, the B-GA-400 is the "capstone" aerospace doctrine publication. However, my editing error aside, it is still worth a read.

Aerospace Doctrine:
Authority and Responsibilities

CF Aerospace Doctrine establishes officially sanctioned beliefs and principles that describe and guide the proper use of aerospace forces in military operations. It is authoritative but requires judgment in application. CF Aerospace Doctrine is developed and promulgated on the authority of the Chief of the Air Staff (CAS) as Commander Air Command.

Commander 2 Canadian Air Division/Air Force Doctrine and Training Division (2 Cdn Air Div/AFDT) is the designated Aerospace Doctrine Authority (ADA), responsible to the CAS, and has authority over all aspects of aerospace doctrine, including the ratification of the six Air Force functions. The ADA is also the designated coordinating authority for CF joint and combined doctrine that encompasses aerospace functions. To meet their aerospace doctrine responsibilities, the ADA is assisted by the Aerospace Doctrine Committee (ADC) and the Canadian Forces Aerospace Warfare Centre (CFAWC).

BOOK REVIEWS

MANNOCK:
THE LIFE AND DEATH OF MAJOR EDWARD MANNOCK, VC, DSO, MC, RAF

BY **NORMAN FRANKS** AND **ANDY SAUNDERS**

PHILADELPHIA:
GRUB STREET PRESS, 2008
192 PAGES
ISBN 978-1-906502126

Review by
Major William March, CD, MA

Every so often you come across a book that you want to like, but there are one or two major issues with it that just rub you the wrong way. *Mannock: The Life and Death of Major Edward Mannock, VC, DSO, MC, RAF* is one of those books.

Although Andy Saunders is a new author to me, I have read and enjoyed many of the books written by Norman Franks, an extremely knowledgeable air historian and excellent writer. His books are not academic studies. Instead, they are a thorough and riveting telling of whatever subject is the focus of that particular book. On this level, *Mannock* did not disappoint. Although it relies primarily on secondary sources, it is a rich and detailed biography of an outstanding World War I airman whom many consider to be the premier British ace of that conflict.

The majority of the book concentrates on Mannock's exploits in the air. Using material from combat reports, Mannock's diary as well as recollections from comrades published in a variety of sources, the authors craft an incredible portrait of this most capable aviator. At the relatively "old" age of 29, he joined the Royal Flying Corps (RFC) in August 1916. He earned his wings in November of that year and was posted to France on 2 April 1917. Between that date and his death from ground fire on 26 July 1918, he would reach the rank of major, command a squadron, amass 60 victories and be awarded virtually every award for gallantry (some more than once)—truly an incredible life! However, as the authors point out in their narrative, this type of success does not come without cost, and prior to his death, Mannock was exhibiting signs of exhaustion and stress.

Not only is the book rich in detail on Mannock's exploits, it also provides a significant amount of information on the men who flew with him. The authors seemed to feel that a better appreciation of Mannock could be gained by knowing more about the individuals who fought with him; in essence, their experiences were used to fill in blanks about the main character. For the most part, I think they succeeded, but there were times when I wondered who the book was really about.

Another interesting aspect of the book is the final three chapters that deal with what transpired after the war was over. Mannock was shot down behind enemy lines and was hastily buried by German forces. Although they provided details of his burial to the Red Cross (including proof of his identity), his remains were never definitively located. The authors describe how it came to pass that Mannock's

remains were "lost" and analyse existing information to postulate what might have taken place and speculate on where his exact resting place might be. So persuasive is their research that, at time of publication, the British Ministry of Defence was examining their evidence in order to erect a headstone reading "believed to be."

Although there is much to like about this book, it does have a major flaw. In my opinion, the authors' desire to emphasize Mannock's achievements and status as a great fighter pilot led them to indulge in "Bishop-bashing." The Bishop I am referring to is Canadian Billy Bishop whose World War I exploits are often the subject of intense debate and controversy. Often Bishop made claims for victories based solely on his word (a not uncommon practice) and his Victoria Cross-winning attack on a German aerodrome on 2 June 1917 continues to be debated as it is (as the authors state) "the first and only time this decoration has ever been awarded just on the recipient's own say-so."[1] There is no doubt on what side of the debate the authors reside; however, they take their bias against Bishop to a whole new level by intimating that Bishop, in command of 85 Squadron, was a weak leader who was more interested in his personal score than he was the men under his command. Thus, the never identified "powers that be" had to relieve Bishop and substitute a better one—Mannock being the "obvious" choice. Therefore, "rather than a deserved rest, Mick Mannock was sent instead to command Bishop's old unit."[2]

I, too, have issues with Bishop's claims; however, this book isn't about Bishop. He is, nonetheless, the only airman dealt with in this manner in the entire narrative. As the authors note throughout the book, "victories" were often claimed without witnesses or proof of actual destruction of an enemy aircraft (Mannock has several). Whether or not Bishop was a "good" leader is another debatable point, but you should not argue that he rarely led patrols and then state this was "how things were usually done," or write that Bishop needed to be replaced by "an equally strong personality" and then offer up Mannock as having the same personality. Although the book is rich in detail about Mannock, it is difficult to find examples that exemplify his leadership ability—indeed, it seems that the authors paint a picture of an individual more similar to Bishop than not. Finally, regardless of whether or not you agree with all of Bishop's claims or the awarding of the Victoria Cross, to write "whatever the truth about the 2 June affair or Bishop's other claims, it must be said that he did at least survive flying over the Western Front at a time when many young men did not"[3] detracts from the exploits of a brave and deadly fighter pilot.

My "ranting" aside, I think that *Mannock* is well worth a read. It provides additional insight into the life, and all too often death, of World War I airmen. And, last but not least, it is an intimate portrait of an exceptional man whose accomplishments were noteworthy. The book would be a welcome additional to any aviation library. ■

Major William March, an Air Combat Systems Officer (ACSO), is the Academic Liaison Officer at the Canadian Forces Aerospace Warfare Centre. He has taught Canadian defence and air power history at the undergraduate level and is currently pursuing his doctorate in War Studies at the Royal Military College.

Notes

1. Norman Franks and Andy Saunders, *Mannock: The Life and Death of Major Edward Mannock, VC, DSO, MC, RAF* (Philadelphia: Grub Street Publishing, 2008), 125.

2. Ibid.

3. Ibid.

AIR COMBAT OVER THE EASTERN FRONT AND KOREA:

A SOVIET FIGHTER PILOT REMEMBERS

BY **SERGEI KRAMARENKO**
(translated by **Vladimir Krupnik** and **John Armstrong**)

BARNSLEY, SOUTH YORKSHIRE:
PEN & SWORD PRESS LTD, 2009
164 PAGES
ISBN 978-1-84415-735-8

Review by
Major William March, CD, MA

Often when I am studying a particular air power campaign, I cannot help but feel that there is something missing—the view from the other side. To my mind, important elements in understanding our chosen profession are how an adversary prepared to contest allied (or coalition) air power, how they adapted during the campaign, and how they perceived air power's impact. Unfortunately, there are not a lot of English-language books that provide this type of perspective, especially ones that focus on post-World War II conflicts. Fortunately, this is slowly changing, and one of the most recent additions is *Air Combat Over The Eastern Front and Korea: A Soviet Fighter Pilot Remembers*.

This book appears to be the second in The Red Air Force at War series which consists of the translated recollections of Soviet airmen. In the case of this book, fighter pilot Sergei Kramarenko begins by chronicling his experiences in combat against the German *Luftwaffe* on the Eastern Front during World War II. It begins as a story of young men who, with scant flight training, are sent to the front to fly against a skilled adversary equipped with superior aircraft. Survival had more to do with luck than skill as Kramarenko and his comrades learned their trade. Shot down in 1943 by an unseen German fighter in the skies over Kursk, Kramarenko was severely burned and spent a brief time as a prisoner of war before being freed by his countrymen. This brief period of captivity would cause him to be labelled as politically suspect and impact his post-war military career.

After recovering from his wounds, Kramarenko returned to a changed Soviet Air Force. Experience and increasing numbers of modern aircraft permitted the Soviets to meet the *Luftwaffe* on more even terms. Kramarenko's descriptions of combat against German fighters take on an air of calm professionalism as he details actions against German bombers and the still formidable *Messerschmitt* Me-109s and *Focke-Wulf* 190s—the hunted has become the hunter. An ace many times over, he was made a Hero of the Soviet Union and finished the war at an airstrip just outside of Berlin. Less than six years later, the Korean War erupted, and he was flying in combat again. However, this time it was as a "volunteer" and his adversaries were former allies.

The majority of the fighter pilots dispatched to assist North Korea were combat veterans; equipped with the MiG-15 jet fighter, they very quickly made their presence known. However, due to political requirements the volunteers were not permitted to wear Soviet uniforms,

flew in aircraft painted in North Korean colours, and were forbidden to operate in areas where—if shot down—they might be captured. In a very real sense, they shared the same frustrations that the United Nations airmen (whom they were flying against) felt. For example, the United Nations airmen were forbidden to pursue the MiGs outside of Korean airspace.

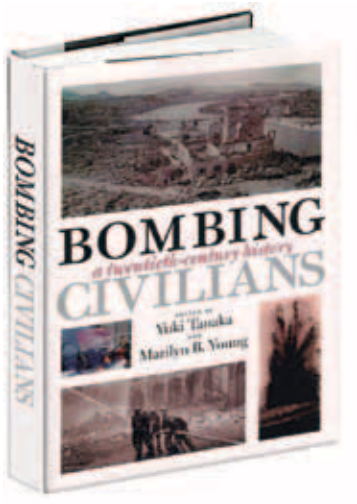
Having achieved air superiority, if not air supremacy, the United Nations air forces (primarily American and British) had made liberal use of propeller-driven aircraft such as the P-51 Mustang and B-29 bomber. When there was insufficient jet fighter protection (in the form of the ubiquitous F-86 Sabre), Kramarenko and his fellow pilots made operations conducted by these "vintage" aircraft extremely hazardous. Jet-on-jet combat was frequent and the MiG-15 in the hands of skilled pilots could hold its own against the Sabre and was superior to the F-80, F-84 and British built Meteors.

Kramarenko's description of air-to-air combat in Korea is quite detailed. There is very little Soviet-era rhetoric included in the book, and the reader is quickly left with the impression that they would be at home as a fighter pilot in any air force. It was fascinating to read about how the Soviet pilots were selected and trained as well as how they performed against their adversaries. As the narrative unfolds, a quite different picture of the air war in Korea is told. It becomes the story of how a small number of Soviet airmen fought with skill and tenacity against a numerically superior enemy. Nor were hostile aircraft the only danger that the Soviet pilots had to contend with. As Kramarenko notes, whenever the average North Korean farmer came in contact with any airman—usually as a result from a hurried departure from a damaged aircraft—they considered him the enemy, and more than one Soviet pilot met their death at the hands of their allies.

Although readers might scoff at some of the numbers of aerial victories claimed by Kramarenko for both himself and the Soviet fighter units, this should not detract from the book as a whole. As noted by the translators several times throughout the book, claims are often difficult to reconcile with actual losses and **all** air forces have tended to exaggerate their performance at one time or another. The translators also provide some much welcome explanations of Russian slang that is used in the narrative and occasionally offers brief explanations of the major events in which Kramarenko was taking part, but there could have been more.

In all, the book is an easy read and quite interesting. It provides a unique Soviet perspective for both World War II and the Korean War. The description of air combat has the potential to provide some unique insight into the Korean air campaign—especially if read in conjunction with a Western history of the conflict. Finally, although it is sometimes easy within an air force to submerge oneself within the technology and see combat as the destruction of a target or the elimination of a fuzzy-picture on a video feed, we should never forget the human element of our enemy du jour. ■

Major William March, an Air Combat Systems Officer (ACSO), is the Academic Liaison Officer at the Canadian Forces Aerospace Warfare Centre. He has taught Canadian defence and air power history at the undergraduate level and is currently pursuing his doctorate in War Studies at the Royal Military College.



BOMBING CIVILIANS:
A TWENTIETH-CENTURY HISTORY

EDITED BY **YUKI TANAKA** AND **MARILYN B. YOUNG**

NEW YORK:
THE NEW PRESS, 2009
291 PAGES
ISBN 978-1-59558-363-5

Review by
Colonel P. J. Williams, CD

Great. Yet another book about strategic bombing. As if we haven't heard enough about this already. Right? Wrong. Given that former Bundeswehr Chief of Staff General Wolfgang Schneiderhan and a senior German Defence Ministry official both resigned in the wake of a 26 November 2009 airstrike called in by German soldiers in Afghanistan, in which between 30 and 40 civilians were killed, this issue continues to maintain relevance. Indeed, the current commander of the North Atlantic Treaty Organization (NATO) International Security Assistance Force (ISAF) in Afghanistan, United States (US) General Stanley McChrystal, has expressed concern on several occasions regarding the use of airstrikes in the fight against the Taliban in that country. For both these reasons this book is highly welcomed.

The book is a series of essays written by authors from the United States, Japan and Germany with backgrounds varying from expertise in the domains of history, philosophy and law. With such an authorship, I was expecting a somewhat dry and academic work, but such was not the case. The editors have brought the contributors together in an attempt to address and answer the question,, "Why did military planning in the early twentieth century shift its focus from bombing military targets to bombing civilians?"[1]

The first part of the book helps provide some of the historical context to set the scene for more general discussions of bombing later in the work. Thus we are introduced to the subject with a description of the British use of what was referred to as "air policing" in Iraq in the 1920s, an issue in which both Winston Churchill, Secretary of State for both War and Air, and Arthur Harris, later Commander in Chief of Bomber Command in World War II, were involved. The author of this essay is quite critical of British practices during this period, contending that notwithstanding ostensibly rigorous processes to ensure avoidance of civilian casualties and collateral damage, actual procedures were not as strict, with tragic consequences for the civilian population. The author concludes that what he calls the "practice of indiscriminate bombing"[2] by the British in Iraq and by the Italians in Ethiopia in the 1930s, paved the way for strategic bombing in World War II.

Subsequent chapters deal with the Allied bombing of Germany by the air forces of the Commonwealth and the United States, as well as the US bombing campaign against Japan and the Japanese bombing of Chinese cities. While one chapter, entitled, "The Bombing Campaigns in World War II: The European Theatre" raises many questions, such as, "To what extent did the morale attacks affect

the enemy's ability to fight?".[3] These are left pretty much unanswered. To bring the book up to date there are also chapters on the evolution of US bombing in Korea (where the author contends that the use of nuclear weapons was contemplated by the US), Vietnam, and the wars in Iraq. Sadly, little mention is given to the use of airpower in the current campaign in Afghanistan.

This said, this book has much to commend itself. The contributors demonstrate a mastery of the current literature on the subject, as well as archival material (the notes pages number some 32). One author makes good use of former German Secret State Police (Gestapo) files to provide a perspective of the German population's view of what it was like to live under the bombs. Another author makes a good case for his contention that it was the threat of Soviet intervention in Asia in 1945 that forced the Japanese to surrender, not the atomic bombs dropped on Hiroshima and Nagasaki.

Finally, an entire chapter is devoted to the current international legal framework surrounding the issue of targeting and bombing. To illustrate the issue, the author makes reference to incidents in World War II, the former Yugoslavia and the first Gulf War. In his conclusion, the author addresses some of the targeting challenges posed in an asymmetric environment. While not a substitute for formal rules of engagement or targeting training, this chapter in particular helps the reader understand how the continuing challenge of avoidance of collateral damage was faced in the past.

The issue of strategic bombing, whether in the context of the wars of the 20th century or those of our age, continues to hold fascination and relevance for both the general reader and the contemporary military audience. As such, books like this are both highly welcome and recommended. ■

Colonel Williams, an artillery officer, is currently attending second language training.

List of Abbreviations

ISAF	International Security Assistance Force
NATO	North Atlantic Treaty Organization
US	United States

Notes

1. Yuki Tanaka et Marilyn B. Young. *Bombing Civilians: A Twentieth Century History*, New York, The New Press, 2009.

2 . Ibid., p. 29.

3. Ibid., p. 43.