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THE CANADIAN

# AIR FORCE JOURNAL



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**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.

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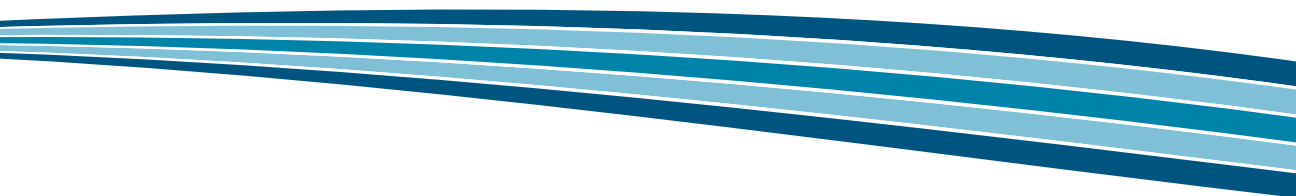
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As a bilingual journal, readers should take note that where citation in endnotes are translated from their original language, we will use the term "Translation" at the end of the note to indicate that readers can find the original citation in the other language version of the Journal.

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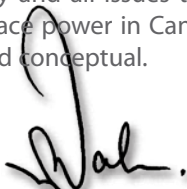
# EDITOR-IN-CHIEF'S MESSAGE

It is a pleasure to introduce the third edition of the Canadian Air Force Journal and the first during my tenure as Editor-in-Chief. Already the Journal is well on its way to becoming a fixture of stimulating and open professional thought on Canadian aerospace power issues. So far each edition has offered a well-received selection of articles covering a range of topic areas, as well as a number of book reviews of interest to the Canadian military aerospace professional.

As we make quick progress towards maturing the Journal into the focal point of professional discourse and debate within the Air Force, the time is right to promote the Journal's purpose not only as a source of thought-provoking articles, but also as a forum for the free exchange of ideas and opinions, as well as reactions to recent articles. To that end, the Canadian Air Force Journal is introducing a new section intended to allow the Journal's readership to immerse itself in just that kind of exchange. This new section, titled *Pushing the Envelope*, will be a recurring feature of future Journal editions. In this issue we provide the guidelines for being part of the *Pushing the Envelope* discussions. As you will see, these guidelines have been formulated to facilitate and encourage easy participation in this forum, dedicated to the exchange of thoughts and ideas on current issues that merit more intense deliberation among the larger professional community. As such, it is meant to provide a mechanism for more than just simple editorial feedback, also soliciting thoughts on issues that are current and important to our readership. I encourage one and all to become active in the many discussions that will surely follow.

As initial grist for this effort to make the Journal somewhat more of an interactive undertaking, this edition provides a varied selection of full-length articles to stir your interest and incite you to be heard. These include the second and final part of a look at the evolution of Staff Systems in the Canadian Air Force, an article on the life of RMC Cadet and WWI soldier-turned-flyer Lieutenant Franklin S. Rankin, and a conflict resolution piece that looks at recent initiatives to introduce interest-based conflict management into Canadian pre-deployment training. The edition is rounded out by a reprint of a 1952 address by then Air Commodore Clare Annis on the best employment of Air Power (this first appeared in the March 1953 edition of *Roundel*), as well as a point of interest article on the Canadian Centennial of Flight, and a number of timely book reviews.

Enjoy this latest offering of your professional journal. We look forward to hearing from you on any and all issues that you view as important to the development and employment of aerospace power in Canada, from the tactical, operational and strategic to the historical, technical and conceptual.



Col M.R. Dabros, CD  
Editor-in-Chief



## SUBMISSION REQUIREMENTS

THE 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: <ul style="list-style-type: none"> <li>• the book's complete title (including sub-title);</li> <li>• the complete names of all authors as presented on the title page;</li> <li>• the book's publisher, including where and when it was published;</li> <li>• the book's ISBN and number of pages; and</li> <li>• a high resolution jpeg file (at least 300 dpi) and at least 5 x 7 inches (12 x 18 cm) of the book's cover.</li> </ul>
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

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  - A list of all abbreviations (and their terms) used in the text will be included at the end of each submission.
- The 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.

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Soldiers ride in a C-117 Globemaster en route to Kandahar Air Field, Afghanistan. Photo by Cpl Simon Duchesne

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## Interest-Based Conflict Resolution *and the* Deployed Soldier

by Maj Brad Coates

From a Canadian Forces (CF) perspective, the theme of the 2008 Annual Symposium on Conflict Resolution, “Identity-based Conflict, Human Security, and Peace Building,” is both timely and important.<sup>1</sup> Armed forces, in general, and the CF, in particular, are long standing actors in the fields of human security and peace building. And while the role played by the CF in these areas has not always been widely recognized, recent events in Afghanistan have provided a measure of increased visibility. Notwithstanding this enhanced public awareness, there likely remain some readers who continue to perceive armed forces as purely blunt instruments of state power. For such individuals, the title of this paper – “Interest-Based Conflict Resolution and The Deployed Soldier,” – may seem something of an oxymoron.<sup>2</sup> From such a vantage point, the notion of soldiers employing something other than a power-based approach to conflict resolution would, indeed, seem odd. Although

not my primary intent, the following may also be a useful introduction to some of the diverse activities undertaken by modern militaries.

This paper discusses a recent CF initiative to introduce interest-based conflict resolution into pre-deployment training.<sup>3</sup> While this training has been conducted with several units, the current discussion is limited to its application within the civil-military cooperation (CIMIC) environment.<sup>4</sup> To provide necessary context, conflict management in the CF and the current mission in Afghanistan are briefly discussed. Thereafter, the nature of CIMIC work and some of its associated challenges are explored. Finally, the relationship between conflict resolution skills and CIMIC operations is considered. From my perspective, as an Alternative Dispute Resolution (ADR) practitioner and as a CF officer, the inclusion of conflict management in pre-deployment training is an exciting and important development. It speaks strongly to



the growing recognition of conflict management as a core leadership competency and to the acceptance of interest-based approaches to dispute resolution.

At the outset, a few caveats should be noted. First, although I am a military officer I have not served in Afghanistan and, consequently, am not an expert on the military or political situation in that country. The general contextual comments made in this regard are drawn from open source literature and from discussions with soldiers who have served in Afghanistan. My expertise and comments are largely limited to interpersonal conflict management and communication. Second, while the term “deployed” is sometimes used in a general sense to denote soldiers operating away from their home base, in the following paragraphs it is employed in a more restricted sense to refer to soldiers deployed in support of operations in Afghanistan.

The CF has long recognized that the management of interpersonal conflict is an inherent aspect of leadership and a key contributor to operational success.<sup>5</sup> As a consequence, CF members have historically had recourse to several dispute resolution mechanisms, including access to the organizational hierarchy and an internal grievance system. In 2001, the CF conflict management system was augmented by the establishment of an ADR program.<sup>6</sup> The CF ADR program provides two broad types of service - training and interventions. With regard to the former, communication and conflict management training is provided through a range of leadership and professional development vehicles, while with respect to the latter, a variety of intervention services are provided, including conflict coaching, mediation and facilitation.

While cognizant of the need to provide reactive dispute resolution mechanisms, the primary focus of the CF ADR program is to enable individuals to address interpersonal conflict early and informally by fostering development of the necessary skills, confidence and orientation. When third party intervention is required,

a non-directive interest-based methodology is employed. This approach attempts to break the adjudicative and adversarial paradigm of traditional conflict resolution approaches by shifting the onus for solution development from interveners to participants and from one-sided to joint outcomes. Interest-based theory posits that the positions taken by disputants in conflict are often the consequence of more fundamental underlying factors.<sup>7</sup> These factors (interests, needs, concerns, etc.), represent the reason why certain positions or claims are adopted in conflict situations. Interest-based theory contends that identifying and exploring these core causal factors can have a profound effect on conflict, helping to create understanding, strengthening relationships and opening up avenues to integrative and collaborative problem solving.

With this context in hand, we now turn to Afghanistan. As of January 2008, Canada has approximately 2,500 soldiers participating in the North Atlantic Treaty Organization (NATO) led International Security Assistance Force mission.<sup>8</sup> The majority of CF activities are centred in Southeast Afghanistan in Kandahar province. Kandahar province is a sparsely populated region characterized by one large urban centre, Kandahar City, and numerous small villages. From a socio-economic perspective Pashtu is the dominant language, Islam the dominant religion and the economy is largely agrarian.

While 2,500 troops is a significant contingent, when considering the overall operation in Afghanistan the CF contribution represents only a part of a much larger multi-national, multi-agency endeavour involving several dozen nations, numerous international organizations and non-governmental organizations – a truly massive and complex undertaking. In certain ways the current situation in Afghanistan is a paradigm of the modern developmental challenge, a struggle between the interdependent demands of development and stability. On the one hand, a degree of stability is required to create an environment wherein development can occur, while on the other hand, a level

of development is necessary to foster social and political stability. As a result of these competing tensions, an array of concurrent developmental and security activities are taking place in Afghanistan.

Within this locus of activities, CF efforts are centered in three broad areas: security, mentoring and reconstruction, with CIMIC activities coming under the auspices of the latter category of reconstruction and development.<sup>9</sup> Though the specific activities undertaken by CIMIC operators vary from operation to operation, NATO doctrine defines the CIMIC mission as, “The co-ordination and co-operation, in support of the mission, between the NATO Commander and civil actors, including national population and local authorities, as well as international, national and non-governmental organizations and agencies.”<sup>10</sup> In other words, CIMIC supports operational objectives by working with local and international stakeholders to address developmental issues. Though CF CIMIC units have some internal resources, a significant aspect of their work involves coordinating the needs of local communities with the capacities of potential service providers. A recent event in the village of Kharut is a simple illustration of such work. Social and economic activity in the small farming community had been disrupted by an irrigation canal that ran through the centre of the village. This five-metre wide canal, impassable except for a makeshift log bridge, for all intents and purposes divided the community in half. This situation was a serious impediment to village activities, causing time-consuming detours of vehicular traffic and disrupting the majority of day-to-day economic and social activities.<sup>11</sup> In order to address this issue, CIMIC operators met with local leaders to develop a solution to meet the needs of the community. In this case, a bridge designer was contracted and local workers were hired to undertake the construction work.

Though *prima facie* this type of work can appear deceptively simple, in reality, it is often a formidable endeavour to coordinate the activities and needs of disparate local and

international stakeholders. Even under ideal circumstances, these types of multi-party undertakings are replete with opportunities for misunderstanding and disagreement. Far from ideal, conditions in Afghanistan are complicated by a conflation of daunting environmental and cultural obstacles. Of crucial importance with regard to the operational environment, is the fact that nation-building activities are taking place concurrently with combat operations. The absence of a peace settlement is a powerful mitigating factor. Not only does it entail a heightened level of risk for CIMIC operators, but also for local individuals and communities. In other words, with respect to this latter point, there are often repercussions for Afghans who cooperate, or are perceived to cooperate, with pro-government organizations such as the CF.<sup>12</sup>

Challenging environmental conditions are further compounded by an array of cultural hurdles. In a sociological sense, culture is understood to be those ways of thinking and acting that help to distinguish members of one society from members of another society.<sup>13</sup> When considering Canada and Afghanistan through such a lens there is a plethora of cultural differences, which could potentially influence interactions between members of the two societies.<sup>14</sup> One such consideration that is especially salient to the current discussion is what social anthropologists refer to as “context.” That is, the manifold of activities that surround and influence communication transactions between individuals and groups.<sup>15</sup> Following Hall, societies are often bifurcated into those that are low context and those that are high context. Low context societies, such as Canada and the United States, are characterized by direct and explicit communication, wherein the precision of terminology is important and communication transactions are routinely viewed as isolated or compartmentalized occurrences. In contrast, communications within high context societies, such as those found in Africa and Asia, tend to be indirect and implicit. And, rather than being viewed as isolated events, communication transactions tend to be interpreted in light of the

overarching social narrative in which they occur.<sup>16</sup> Given this understanding, where does Afghanistan fall in a taxonomy of cultural context? Though there is a paucity of information regarding Afghanistan in the literature, extrapolation from countries in its cultural and geographic proximity suggests that Afghan society is likely high context.<sup>17</sup> While it is evident that this type of contextual assessment is a blunt analytical instrument, it does highlight some potential impediments confronting CIMIC operators. Namely, it illustrates that societies such as Afghanistan can be difficult for outsiders to rapidly enter and operate within.

Having briefly looked at CIMIC operations in Afghanistan and some of its associated challenges, we now turn to the subject of conflict resolution training. Before delving into this subject in detail, it is helpful to situate conflict resolution within the broader framework of pre-deployment preparations. As with other CF personnel, CIMIC operators undergo an extensive period of training prior to deployment. This training encompasses activities ranging from general military skills to more mission and unit specific tasks. Given this already substantial level of preparation, why the incorporation of conflict resolution training? In answering this question, two important and interrelated points are examined; operational effectiveness and environmental fit. First, the argument for enhanced operational effectiveness, that is, the notion that conflict resolution skills contribute to mission success. Such contributions can be further sub-divided into those internal to the unit and those external to the unit. When considered from an internal perspective, conflict resolution skills contribute to morale, and, consequently, operational effectiveness by fostering communication and understanding amongst unit members.<sup>18</sup> When considered in their application external to the unit, interest-based skills are valuable tools to help CIMIC operators develop the rapport and trust that is crucial to their success. This latter point is especially important, given the nature of CIMIC work. CIMIC operators are illustrative of the so-called "Strategic Corporal" concept wherein the actions of individual

soldiers are recognized as crucial components of overall mission success in modern warfare.<sup>19</sup> The growing recognition of the need for soldiers to have a wide range of negotiation and communication skills is not limited to Canada. A recent paper from the US Army Institute for the Behavioral and Social Science argues for the requirement to provide US soldiers with a greater level of negotiation training. In particular, the authors advocate augmenting current skill sets with "non-directive," or interest-based training to better enable soldiers to function in the modern battle space, characterized by a multiplicity of concurrent and diverse operations ranging from combat operations to peace building activities.<sup>20</sup>

In addition to improved operational efficiency there is also an argument from fit, that is, the notion that interest-based conflict resolution is well suited for use in Afghanistan. As previously noted, trust and understanding can be necessary prerequisites to substantive discussion in high context societies. From this vantage point, interest-based communication with its relational focus would seem to be well suited to help establish this important interpersonal rapport. Also relevant to the issue of cultural fit is the notion of indigenous or original dispute resolution (ODR) mechanisms. That is, the manner in which disputes have traditionally been handled within a given society, is conflict approached in an adversarial manner, framed as a win-lose proposition, or is it dealt with in a consensual and collaborative manner? Social commentators such as Reade and McKenna-Reade contend that ODR processes in many non-Western nations have historically been of the latter consensual variety.<sup>21</sup> They note that traditional Asian and African societies are characterized by a "consensual predisposition" toward conflict where relationships and face saving are important considerations. As with the notion of context, ODR research suggests an environment conducive to interest-based problem solving.

In conclusion, a few words about our training initiative. Given current space constraints, comments in this area are necessarily somewhat



cursory in nature. While pre-deployment conflict resolution training is normally delivered as an integrated four to five-day package, for ease of discussion it is divided into three broad components; conflict theory, communication and practical application.

The theoretical component provides participants with an appreciation of key concepts pertaining to interpersonal conflict, including dispute resolution approaches and conflict management styles. Particular attention is paid to the different avenues that are available to address conflict (i.e., power-based, rights-based and interest-based).<sup>22</sup> Although the focus of the training is interest-based, the goal of this examination is not to advocate for a particular approach, but, rather, to assist participants in gaining an understanding of the strengths, weaknesses and appropriateness of the respective options. While, with respect to conflict management styles, a variety of psychometric tools are used to encourage participants to reflect on their personal conflict management style and its potential impact in conflict situations. This theoretical portion allows individuals to enhance their knowledge of interpersonal conflict and consider their role in dispute resolution. Pedagogically, this material is approached through discussions and exercises ranging from largely abstract conceptual examinations to more specific operational applications.

In the field of conflict resolution it is generally recognized that there is an intimate relationship between interpersonal conflict and communication. In other words, a lack of communication, or poor communication, can often lead to conflict, while good communication is frequently the most expeditious means of diffusing or resolving conflict. Though this observation can seem trivial, experience shows that when it comes to activities such as communication, there is often a considerable gap between an individual's conceptual awareness and their practical ability. It is one thing to "know" what good communication entails; it is quite another thing to be a good communicator. As a consequence, communication is

approached in a multi-faceted manner. Participants are exposed to a variety of technical skills to provide them with the requisite foundation to conduct interest-based conversations. In addition to specific skills, a collaborative communication model is introduced as a means to structure and guide problem solving. As important as technical tools and structure are, often the key determinant in successful communication is orientation – the way in which conversations are approached. Are conversations seen as learning opportunities entered in an open and curious manner, or are they seen as competitive struggles approached with rigid positions and assumptions?

The last and largest portion of conflict resolution training is practical application, wherein participants have the opportunity to practice interest-based skills in a series of coached role-plays. The value of such experiential learning with regard to communication and dispute resolution is difficult to overstate. Without such hands-on application it is a difficult, if not insurmountable, task to bridge the chasm between theoretical learning and skills development. Unless individuals are provided sufficient time to become comfortable with the interest-based approach, it is unlikely that they will be able to employ it in actual conflict scenarios where risk and emotion are often elevated. In order to maximize training value, role-play scenarios are customized to meet the needs of the specific unit. In this case, scenarios were developed with input from CIMIC operators previously deployed to Afghanistan. Role-play scenarios range from relatively simple disagreements between colleagues to more complex situations involving multiple parties from external organizations and the local community.

What does the future hold for pre-deployment conflict resolution training? While we have received some anecdotal feedback, a more systematic analysis will not occur until later this year when units that have undergone conflict resolution training begin to return to Canada. Given that this initiative is still in the developmental stage, there are a range of questions that need to be considered, including,

perhaps most importantly, to what degree are interest-based skills suited for use in the operational theatre? That is, are they amenable to use with the full spectrum of audiences, internal as well as external, or are they most effective when used amongst groups that share linguistic and cultural similarities? This paper has argued that, from a conceptual perspective, there is a potential fit between interest-based conflict resolution and Afghan society. While theory often drives practice, in accordance with standard scientific methodology, theoretical concepts need to be reviewed and validated against experience – does this hypothesis stand

up to experience?<sup>23</sup> While, from a training delivery perspective, can conflict resolution training be better incorporated into broader pre-deployment preparations? For instance, can it be more fully integrated with cultural training, or, perhaps, delivered earlier in pre-deployment work-ups to facilitate issues associated with unit formation and cohesion? ■

*Major Brad Coates has been employed as the coordinator of the Borden Dispute Resolution Centre since Aug 2004, where he works as an alternative dispute resolution practitioner.*

## Notes

1. This paper is based on comments made by the author at the 17<sup>th</sup> Annual Symposium on Conflict Resolution organized jointly by Carleton University, Saint Paul University, and the University of Ottawa, held in Ottawa, Canada 1 February 2008. The views offered are those of the author and do not necessarily reflect those of the CF.
2. The term "soldier" is used in a broad sense to encompass all CF members regardless of environmental affiliation (i.e., air, sea or land).
3. To date this has been largely a "bottom-up" initiative driven by the requests of individual units.
4. Similar pre-deployment training has been conducted with other units (e.g., Mission Support Squadrons and psychological operations).
5. Interpersonal conflict is understood to be disputes amongst individuals or groups of individuals.
6. Department of National Defence, CANFORGEN 064/03 ADMHRMIL 022 May 03, *Conflict Management Program (CMP)*, available at [http://vcds.mil.ca/vcds-exec/pubs/canforgen/2003/064-03\\_e.asp](http://vcds.mil.ca/vcds-exec/pubs/canforgen/2003/064-03_e.asp) (accessed June 17, 2008).
7. For similar views see Roger Fisher and William Ury, *Getting to Yes*, (New York: Penguin Books, 1991), 40-55; and Cheryl Picard et al., *The Art and Science of Mediation*, (Toronto: Emond Montgomery Publications Ltd, 2004), 120-122.
8. Department of National Defence, *Task Force 1-08: Background Information Updated January 2008*, available at <http://www.army.forces.gc.ca/lfwal/tf108/backgrounder.htm> (accessed May 18, 2008).
9. For an introduction to CIMIC from a Canadian perspective see Graham Longhurst, "The Evolution of Canadian Civil-Military Cooperation," *Canadian Military Journal* Vol. 7 No. 4 (Winter 2006-2007), 55-64, available at [http://www.journal.dnd.ca/engraph/Vol7/no4/09-longhurst\\_e.asp](http://www.journal.dnd.ca/engraph/Vol7/no4/09-longhurst_e.asp) (accessed June 17, 2008).
10. North Atlantic Treaty Organization, *AJP-9 Civil-Military Co-operation (CIMIC) Doctrine* (June 2003), 1-1, available at <http://www.nato.int/ims/docu/AJP-9.pdf> (accessed May 15, 2008).
11. Charmion Chaplin-Thomas, "Slippery Logs to Solid Concrete in 30 Days," available at [http://www.canada-afghanistan.gc.ca/cip-pic/afghanistan/library/sff\\_kharut-en.asp](http://www.canada-afghanistan.gc.ca/cip-pic/afghanistan/library/sff_kharut-en.asp) (accessed May 15, 2008).
12. Fraser Clark, "A Pipe Major with a New Tune," available at [http://www.ccfcom.forces.gc.ca/site/fs-cv/2008/03/27\\_e.asp](http://www.ccfcom.forces.gc.ca/site/fs-cv/2008/03/27_e.asp) (accessed May 15, 2008).
13. Geert Hofstede and Gert J. Hofstede. *Cultures and Organizations* 2nd ed. (New York: McGraw-Hill, 2005), 4.
14. Examples of such differences include language, dress and religion.
15. Edward Hall, *Beyond Culture*, (New York: Anchor Books, 1989), 89.
16. Ibid., 90-103.
17. Hofstede, esp. 210-212, 89-112. This has also been confirmed in the author's conversations with soldiers who have returned from Afghanistan.
18. For a discussion of unit cohesion and its importance to the military, readers can see Christopher Straub, *The Unit First*, (Washington: National Defence University Press, 1988).
19. Charles Krulak, "The Strategic Corporal: Leadership in the Three Block War," *Marines Magazine* Jan 1999 available at [http://www.au.af.mil/au/awc/awgate/usmc/strategic\\_corporal.htm](http://www.au.af.mil/au/awc/awgate/usmc/strategic_corporal.htm) (accessed May 15, 2008).
20. Integrative is used in a manner that is largely synonymous with interest-based. Orly Ben-Yoav, Brian Wortinger and Sean Hannah, "Winning the War and the Relationships," US Army Institute for the Behavioural and Social Science, (Arlington Va.: 2007).
21. Carol Reade and Mark Reade-Mckenna, "From Antiquity to the Factory Floor," *International Journal of Conflict Management* Vol. 18, No. 2 (June 2007), 108-127.
22. Brad Coates, "Alternative Dispute Resolution and the Canadian Forces," *Canadian Military Journal* Vol. 7, no. 2 (Summer 2006): 39-46.
23. Carl Hempel, *Philosophy of Natural Science*, (New Jersey: Prentice-Hall Inc, 1966), 16.

## List of Abbreviations

ADR	: alternative dispute resolution
CF	: Canadian Forces
CIMIC	: civil-military cooperation
NATO	: North Atlantic Treaty Organization
ODR	: original dispute resolution



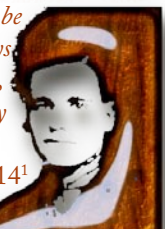
By Major Andrew B. Godefroy, CD, MA, Ph.D.

# From Gentleman Cadet To No Known Grave

The Life and Death of  
Lieutenant (Observer/Gunner)  
Franklin Sharp Rankin  
1894-1916

*"As a friend, Frank would be hard to equal. He is always the same, never presuming, never forgetting, and ready for anything ..."*

The Stone Frigate, 1914<sup>1</sup>





Even though all sides quickly acknowledged the value of air power during the First World War, finding qualified pilots and aircrew to maintain fledgling air forces proved to be a tremendous challenge. For the British, most of its newly formed Royal Flying Corps (RFC) was recruited from the ranks of the army, and despite the dangers of flying these new “contraptions” many willingly applied. If for no other reason than to escape the daily horrors of the trenches, a large number of Canadians were also among those who joined the ranks of the RFC, and several eventually took to the air to fight new battles in the sky.

Franklin Sharp Rankin was typical of those Canadian Army officers turned flyers. Born in Woodstock, New Brunswick, on 31 July 1894, Rankin at an early age chose to pursue a military education and professional training as a soldier. He was a graduate of the Royal

Military College (RMC) class of May 1914, a qualified civil engineer, and served first as a militia cavalry officer before joining the Canadian Expeditionary Force (CEF) when the war began. As an officer with the 1<sup>st</sup> Field



Company, Canadian Engineers, Lieutenant Rankin fought on the western front throughout 1915. Disgruntled with the dismal life and potentially gruesome death of an army officer on land, Rankin transferred to the RFC in 1916, hoping if anything to escape the trenches. Unfortunately the apparent safety of the sky was but an illusion, and Rankin did not avoid an early death at the hands of his enemies later that year.

## Gentleman Cadet No.939

When Franklin Sharp Rankin arrived at RMC in 1911 seeking a soldier's life, he reported for duty at the guardhouse and began a journey from which he would never return. Though neither Rankin nor his peers ever expected a military career without any hardship, active service at the time was accepted with a reserved sense of optimism and opportunity for getting one's name mentioned in the London Gazette. Graduates then passing out of RMC when Rankin arrived for his studies, for example, were heading off to the distant stations of the British Empire. There they took part in a broad range of activities encompassing everything from peacetime military engagement to small wars and counterinsurgency. No one, Rankin included, anticipated the horrors of total warfare that loomed dangerously before him and his classmates, or the tremendous cost it would exact from the ranks of his class before the last shot was fired.

Rankin's military apprenticeship at RMC was much less colourful than those of his classmates. Characterized as a very average cadet, he did not join any of the college sports teams nor did he ever win any of the several trophies awarded for various shooting and athletic competitions held throughout the school year. Rankin had some skill as a horseman and rider having spent his free semester with the 28<sup>th</sup> New Brunswick Dragoons, but the only time he was mentioned in the *Royal Military College Club Proceedings* was when he participated in the apple and bucket competition during the annual Royal Canadian Horse Artillery (RCHA) point-to-point races in

September 1913. Rankin's task was to ride as fast as he could to a spot where water buckets were laid out, take an apple out of the water with his mouth, and mount and ride to the winning post without losing the apple or touching it with his hands. Despite his making a very good show of it, in the end the prize went to Captain W.G. Hagarty of the RCHA, a more experienced apple and bucket racer than the young Rankin.

The only other achievement Rankin is noted for during his third year was a promotion to lance-corporal, the highest rank he attained while at the college.<sup>2</sup> Though apparently quiet and nonchalant, Rankin was still considered a hard worker, astute in mathematics, and always looking to learn something new. Above all, he was known for his friendliness and willingness to help his classmates. He was also known to be a sociable young gentleman. "In town," his graduating biography stated, "[Frank] is what might be described as well settled."<sup>3</sup>

Well rounded yet not outstanding, Franklin Sharp Rankin graduated in the middle of his class in May 1914 with second thoughts about his chosen career. Finally deciding that active service was not for him, Rankin returned home to New Brunswick over the summer to begin a new career as a civil engineer while maintaining his reserve commission with the Dragoons. His planned future as a part time soldier was short-lived, however, when war intervened that autumn.

When the call to arms arrived in August 1914, Rankin immediately terminated his employment with the civil service and joined the other officers from his militia regiment preparing to make their way to Camp Valcartier, Quebec. He was soon reunited with fellow classmates, almost all of whom had, like Rankin, immediately reported for active duty. At first, Rankin was expecting to join one of the cavalry units, but it soon became apparent that these officer slots were beyond his reach. Instead, his engineering degree and experience led him to attesting for

overseas service as an officer with the 1<sup>st</sup> Field Company, Canadian Engineers (CE), then under command of Major W.W. Melville.

It was with this unit that the young Rankin headed overseas. Upon arriving in England, however, Rankin was ordered away from his unit and sent to Shornecliffe where he was taken on strength at the Canadian Engineer Training Depot (CETD). There he trained and trained others until 17 May 1915, when he volunteered to go to France as a reinforcement officer after the 1<sup>st</sup> Canadian Division was mauled at the Second Battle of Ypres.

### To France and Flanders

Having just come out of the line, 1<sup>st</sup> Field Company, CE had suffered at Ypres in April 1915 along with the rest of its fellow units, and desperately needed new officers and men to replenish its depleted ranks.<sup>4</sup> Lieutenant Rankin was ordered to Belgium as a replacement, but, oddly, had served in the line for only 12 days when orders arrived for him to immediately return to the CETD. Rankin reluctantly obeyed, and made his way back to England for another month of training, preparation, and instructional duties. He finally returned to the front on 27 June 1915, and on 10 July he rejoined 1<sup>st</sup> Field Company CE, then stationed in reserve at Nieppe.<sup>5</sup>

In early July, the 1<sup>st</sup> Field Company had moved to its new location at the front. The engineers were in support of the 2<sup>nd</sup> Canadian Infantry Brigade and Seely's dismounted cavalry detachment, which were at the time occupying a new section of the front line approximately 1,200 yards in length. Later increased to 2,200 yards, Lieutenant Rankin and his sappers were kept busy improving the forward positions and ensuring that the brigade had all the engineer support it needed.<sup>6</sup> During the next few weeks there was little movement by either the Germans or the Canadians, both exhausted after the battles of Festubert and Givenchy that had taken place in May. However, engineer tasks continued to increase during this period, as both sides were fully occupied in

improving their respective defences. Suffering the constant daily random harassment from artillery, work never ceased on repairing and maintaining the front line positions.

As the Canadians worked on their own lines, the Germans could be spotted in the distance hard at work on Messines Ridge. Among other tasks, Lieutenant Rankin tried to keep the trenches in his area from deteriorating despite the constant damage inflicted upon them. It was often a thankless task, and as time wore on Rankin became increasingly disillusioned by the ceaseless work before him.

Rankin served with his unit throughout the fall and winter of 1915-1916. He found his existence as an army officer somewhat depressing, to say nothing of being downright dangerous. Random casualties from artillery and machine gun fire were a continuous reminder of the dangers of his army life, and as an engineer he was constantly exposed to enemy fire while attempting to improve the lot of his own fellow soldiers. He also found that there was very little achievement or excitement to be had as a ground soldier, and eventually Rankin sought out new career possibilities to escape from what he was sure would become an unrewarding and random death. On 23 May 1916, he submitted a request to be transferred from the 1<sup>st</sup> Field Company CE to the 1<sup>st</sup> Army Troops Company CE. The request was approved, but it was to be his last posting on the ground. Less than three weeks later, Lieutenant Rankin left the Canadian Engineers altogether for a new career with the nascent Royal Flying Corps.

## Soldier Turned Flyer

The dramatic buildup of the French and British armies in 1916 in preparation for a major assault to break the Germans in the west put increased demands on the Entente's military aviation. To meet the challenges of the upcoming summer offensive, the officer



Side view of a FE.2b

commanding the RFC in the field, Brigadier-General (later Chief of the Air Staff) Hugh Trenchard, with Field Marshal Sir Douglas Haig's support, expanded and reorganized the RFC so that each British army would have an entire air brigade to support it in future land battles.

On the western front an RFC air brigade consisted of a headquarters, an aircraft park, a balloon wing, an army wing of two to four squadrons, and a corps wing of three to five squadrons. This essentially provided one squadron for each corps of the army.<sup>7</sup> The force establishment for each army squadron was 18 aircraft, though units seldom had more than 12 operational machines during 1916. As well, any new aircraft arriving at the front were given first to those squadrons allocated to the upcoming Somme offensive.<sup>8</sup> That meant that recently introduced aircraft such as the new FE2b "pusher" was allocated to the lead attack squadrons, whereas other squadrons had to make do with older airframes. If lucky enough, however, these other squadrons might have received a couple of Martinsyde Scouts or popular DH2s as compensation. The whole process of building up the air brigades was completed by the end of March 1916, just in time for the planned attack at the Somme on 1 July.

In meeting the manpower requirements of the buildup, the RFC increased the establishment of observers in two-seater aircraft squadrons from seven to twelve, and most of these new airmen were selected from army units already in France. Many of the early volunteers came from CEF units. Lieutenant Rankin was among the first draft



Side view of a DH2



of new intakes, arriving at his assignment with No.18 Squadron on 7 June 1916. Formed in





*A Royal Flying Corps Vickers FB5 Gumbus*

May 1915 at Northolt, England, the squadron served first as a training

unit before being posted to France at the end of the year. Originally, No.18 squadron was equipped with Vickers FB5s and a few DH2s, but by April 1916 these had been replaced with the FE2b. The squadron was responsible for a variety of missions; however, in September 1916 it was withdrawn from the front to undertake cooperation missions with the cavalry.<sup>9</sup> The following year No.18 squadron was transferred from a fighting squadron to a bomber squadron, receiving new DH4s to replace the FE2bs.<sup>10</sup>

Rankin soon realized his indoctrination into the RFC would be decidedly short. He received little formal flight training beyond what was imparted at the squadron level, and he attended no formal flight schooling. Rankin had to learn Morse code communications on his own, though he received some formal instruction on how to operate a wireless set and a camera from the squadron ground crew. Rankin, who also had little previous experience with the handling of a Lewis gun, now had to not just learn to operate it, but also to master it against swift moving targets in the air. He knew the only real way to successfully do so was in combat. Finally, along with all the new intakes, Lieutenant Rankin was told he had to “acquire, as rapidly as possible, a detailed familiarity with their squadron’s ‘beat’ at the front.”<sup>11</sup> It was a lot to overcome in a very short time, but failure to do so would mean an early death in the air.

Lieutenant Rankin was destined to fly as an observer flying officer in one of the new British “two-seater” FE2b aircraft then entering service. Overall, the FE2b was a slow yet strong and versatile aircraft, capable of several different mission roles including air-to-air combat, reconnaissance, and bombing operations. The plane quickly became the workhorse

of all the army squadrons in 1916, replacing the older and less effective Vickers FB5 airframe then in use. Still, it was an odd-looking flyer being designed as a “pusher” plane; this meant that instead of the propeller pulling the aircraft along through the air, it instead faced rearwards “pushing” the aircraft from behind. The distinguished design also sidestepped the British failure to date to develop a proper propeller interrupter gear for forward firing weapons, allowing the gunners to engage enemy targets easily and without fear of shooting their own propellers to pieces in the process.

The FE2b aircraft was also designed so that both the pilot and the observer sat forward of the wings. One downside to this arrangement was the fact that the observer, who sat farthest forward in the aircraft, had very little cover or protection. Despite the aircraft’s maneuverability it had a maximum speed of only 73 miles per hour. Engineers compensated for this by heavily arming the aircraft with two Lewis machine guns capable of an exceptionally wide arc of fire.<sup>12</sup> It must have seemed small compensation indeed when enemy aircraft were rapidly bearing down on the man sitting in the front seat, but a talented gunner could effectively keep most predators at bay with his menacing twin guns and their rapid non-obscured rate of fire.

Those taken in as observers were put on a probationary period during which their skills and ability were tested. As a rookie, Lieutenant Rankin’s first assignment was as the probationary observer for Second Lieutenant F. L. Barnard, RFC, who flew an FE2b (aircraft No.4929). After his first couple of sorties, Rankin quickly learned that combat flyers were no less exposed to danger than men on the ground. He was wounded on his fifth sortie on 5 September 1916 during an engagement with enemy fighters, but it was minor enough to allow him to remain on duty with his squadron, in the field.

Enemy air activity had increased significantly in Rankin’s area in the fall of 1916; therefore,

No.18 Squadron flew combat missions daily and thus needed all aircrew they had. Despite his wound, Lieutenant Rankin chose to remain with his original pilot, for if he chose not to fly for medical reasons it meant one of his squadron's planes could not fly against the Germans. Two and a half weeks after his first incident, Rankin's probationary posting became permanent, and he was officially gazetted as an observer/gunner in the RFC on 18 September 1916. He did not know at the time that his new military career would not last even a month.

British air superiority on the western front began to wane in the autumn of 1916. In August-September, the German High Command formed units whose specific role was to engage the enemy in air-to-air combat. These new units, called *Jagdstaffeln* (*Jastas*), were slightly smaller than RFC squadrons, having an establishment of only 14 aircraft.<sup>13</sup> These German squadrons also employed new and greatly improved aircraft, such as the Albatross D-II and Roland, both of which were faster, more manoeuvrable, and better armed than their British counterparts.

Lieutenant Rankin was slightly wounded a second time on 27 September 1916 while engaged against enemy fighters over the Somme. Again, he remained on duty with his squadron and continued to fly with his pilot against the increasing German air opposition. Throughout the remainder of the month allied air casualties mounted as the Germans slowly gained the upper hand in air-to-air engagements. Rankin had two further close calls, plenty of action, and all the excitement he could have hoped for. However, he soon realized the danger as well. Perhaps none of his military training at RMC had prepared him for this

new form of warfare. When Lieutenant Rankin was still a gentleman cadet in



*Albatross D-II*



*Photo demonstrating the observer's firing positions in the Royal Aircraft Factory FE2d. The observer's cockpit was fitted with three guns, one fixed forward-firing for the pilot to aim, one moveable forward-firing and one moveable rear-firing mounted on a pole over the upper wing. The observer had to stand on his seat in order to use the rear-firing gun.*

*Imperial War Museum catalogue number Q 69650*

Kingston, flying machines were novelties, not deadly weapons.

## Death in the Skies

On 20 October 1916, Lieutenants Barnard and Rankin were flying a combat patrol near Le Sars when several German fighters ambushed their aircraft. Barnard had no choice but to engage the enemy, and four German flyers came after him and Rankin. A very shaken Barnard later described the hostile machines as "White biplanes, very fast. Looked like Rolands."<sup>14</sup> The group got tangled in a vicious dogfight that began at 10,000 feet and eventually dropped down to 2,000 feet. During the chase Rankin made a kill. When one of the enemy aircraft pursued the pair too closely, Rankin unloaded a whole drum from his Lewis gun into it and, "it was observed to descend steeply and crash in a shell hole."<sup>15</sup> The remaining enemy gave up the fight, and returned to their base minus one plane. It was a lucky escape for Barnard and Rankin as they could easily have been overwhelmed.

Yet despite such close calls there was little



*Roland D-II*

time for rest. Lieutenants Barnard and Rankin were out flying again on 22 October 1916, this time

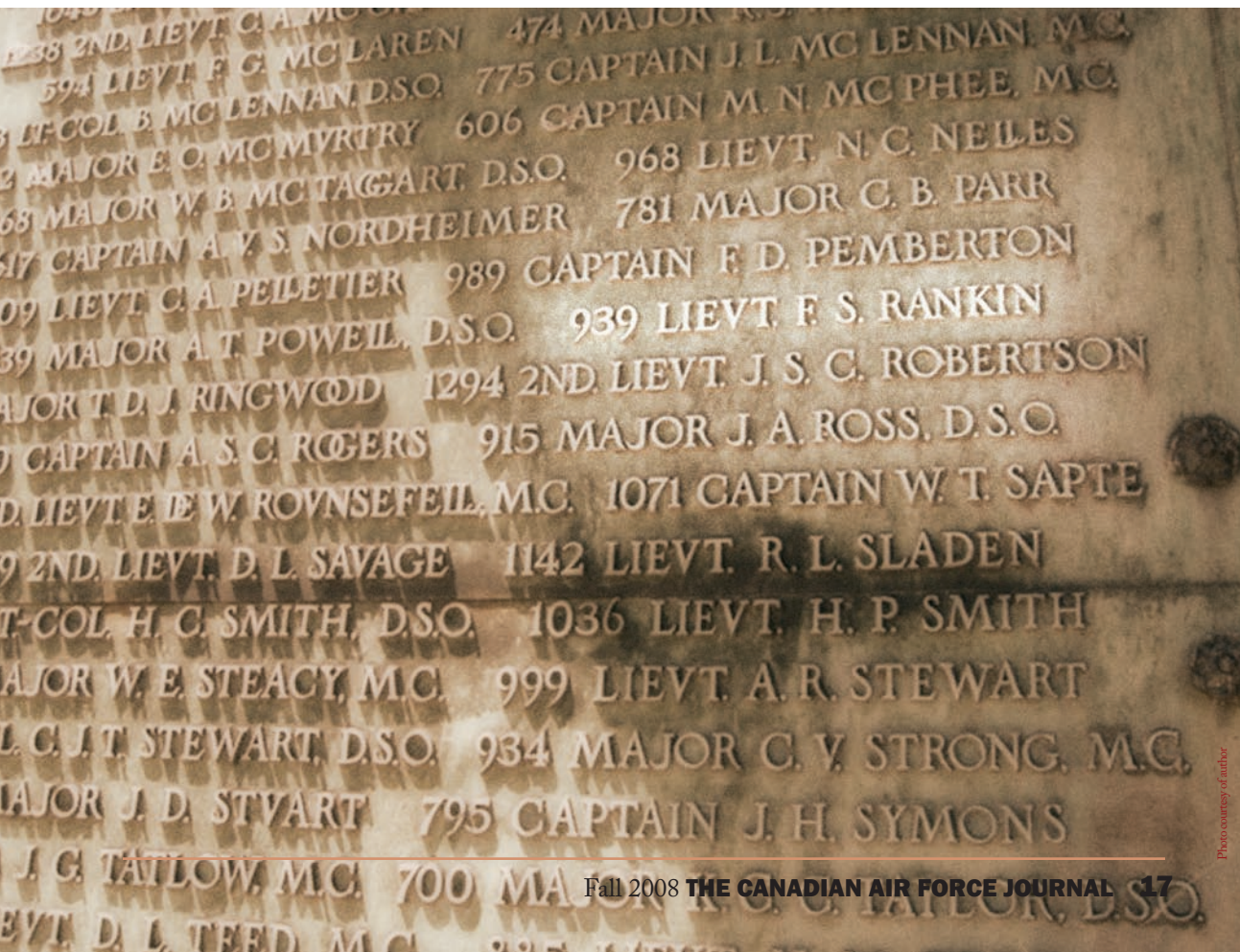


escorting a photo-reconnaissance mission flying over Bapaume. During the course of the afternoon the pair were caught up in a series of engagements with German aircraft, the last of which was to prove deadly. Lieutenant Barnard later described the fateful patrol in his air combat report (ACR) to No.18 Squadron headquarters:

*“When escorting a camera machine over Bapaume we attacked one of several H[ostile] A[ircraft] which were in the neighbourhood of the camera machine... Shortly after two more appeared above us... When these had been driven off we turned for home... but found three more HA on our tail... [Rankin] put one drum into one which was passing straight over our heads at very close range, and this machine immediately became out of control, the tail and back of fuselage being on fire. It went down in a spin. The remaining two HA were now firing from behind and [Rankin] stood up to get a shot at them... one more HA was seen to go down in a*

*nose dive with smoke from its engine... [Rankin] was still firing when he was hit in the head and fell sideways over the side of the nacelle. I managed to catch his coat as he was falling, and by getting in the front seat pulled him back. I then got back in the pilot's seat. The engine and most of the controls had been shot but I managed to get the machine over our lines and landed 200 yards behind our front line...”<sup>16</sup>*

In order to allow Rankin to get a better shot at the last two planes, Barnard had tilted the aircraft up into a stall while Rankin stood up and fired over the top of the plane. Unfortunately this left Rankin very exposed to enemy fire, the FE2b nacelle being little more than a low aerodynamic skirt.<sup>17</sup> From Barnard's report it would appear that the second German aircraft killed Rankin while he was busily dispatching the first enemy plane.



Having lost his gunner and rapidly losing control of his aircraft, Lieutenant Barnard dove for the ground in an effort to shake loose his remaining adversary. Wrestling hard with the controls, Barnard managed to bring the plane down just behind friendly lines. Tragically, Rankin was already dead; the headshot had been fatal. Barnard was recovered by friendly ground forces and taken to a dressing station in the rear, while Rankin's body was prepared for a local burial. He was interred in a temporary grave near the site where Barnard brought the plane down, but unfortunately Rankin would have no permanent resting place.<sup>18</sup> As the war washed over the ground where he lay, his body and grave marker were lost. To this day, Rankin is listed as having no known grave. His name is commemorated on the Arras memorial as well as the great Memorial Arch at RMC, the only acknowledgements of the young, quiet and studious man originally from Woodstock, New Brunswick.<sup>19</sup>

Franklin Sharp Rankin never pined for active military service, but when war came he forfeited the company of his family, the comforts of home, his civilian career and came forth immediately to serve his country. He fought both on the ground and in the air. A pleasant, polite, and unassuming young man, he made the sky his battlefield and fought and died like a Canadian soldier. Though he was never found, his life and his contribution to Canadian aviation history is important, and his story needs to be told. ■

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## Notes

1. Royal Military College of Canada, *The Stone Frigate: The Class of 1914*, (Kingston: RMC Club Press, 1914), 131.
2. During its early years, young men entering RMC were not immediately associated with being officers but instead only gained that affiliation upon graduation. Each entrant was initially assigned the rank of Gentleman Cadet. From this base they could be promoted lance-corporal, corporal, sergeant, and finally to company and perhaps even battalion sergeant major. Commissions were applied for only at graduation.
3. RMC, *Stone Frigate*, 131.
4. By the end of May 1915, the 1<sup>st</sup> Divisional Engineer units had suffered 4 officers and 125 other ranks killed, wounded, or missing in action. For statistics see Col A.F. Duguid, *Official History of the Canadian Forces in the Great War, 1914-1919: Appendix I*, (Ottawa: King's Printer, 1938).
5. Library and Archives Canada [LAC], Record Group [RG] 150, Accession 1992-93/166, Box 8095-52.
6. Col. A.J. Kerry and Col. W.A. McDill, *The History of the Corps of Royal Canadian Engineers, Volume 1: 1749-1939*, (Ottawa: Queen's Printer, 1962), 95.
7. S.F. Wise, *Canadian Airmen and the First World War: The Official History of the Royal Canadian Air Force*, Volume One, (Toronto: University of Toronto Press, 1980), 359.
8. *Ibid.*, 359.
9. Public Record Office [PRO] Kew, United Kingdom. PRO Air 1/916/204/5/871. Notes between Trenchard and Henderson, dated September 1916.
10. Chris Shores, Norman Franks and Russell Guest, *Above the Trenches: A Complete Record of the Fighter Aces and Units of the British Empire Air Forces, 1915-1920*, (London: Fortress Publications Inc, 1990).
11. E. M. Roberts, *A Flying Fighter*, (New York: Private Publication, 1918), 97-146. See also S.F. Wise, *Canadian Airmen and the First World War*, 365.
12. *Wise.*, 361.

### List of Abbreviations

ACR	air combat report
CE	Canadian Engineers
CEF	Canadian Expeditionary Force
CETD	Canadian Engineer Training Depot
HA	hostile aircraft
PRO	Public Record Office
RCHA	Royal Canadian Horse Artillery
RFC	Royal Flying Corps
RMC	Royal Military College

13. *Ibid.*, 384.
14. PRO Air 1/2248/209/43/15 No.18 Squadron Air Combat Report (ACR), 20 October 1916.
15. *Ibid.*, No.18 Sqn ACR, 20 October 1916.
16. *Ibid.*, No.18 Sqn ACR, 22 October 1916.
17. Trevor Henshaw, *The Sky Their Battlefield*, (London: 1995), 120. See also C. Hobson, *Airmen Died in the Great War, 1914-1918*, (London: Grub Street Press, 1995), 85; and C. Cole, ed., *RFC Communiques: Royal Flying Corps 1915-1916*, (London: Grub Street, 1969), 294.
18. No.18 Sqn ACR, 22 October 1916 indicates that Lieutenant Rankin was initially buried near the wreckage of his aircraft. A map reference identified as WoL M.23.b.9.9 is noted.
19. See C. Cole, ed. *RFC Communiques*, and PRO ACR for No.18 Sqn Royal Air Force. Barnard's report is also mentioned in Henshaw and Wise histories.



# STAFF SYSTEMS AND THE CANADIAN AIR FORCE:

## *Part 2*

## *A Convoluted Evolution*

By Major Paul Johnston, Canadian Forces Aerospace Warfare Centre

**W**ho likes staff work? Certainly not air-crew; air forces have always been more fascinated by the daring-do of flying operations than the mundane details of command and staff work on the ground.<sup>1</sup> Perhaps in consequence, the convoluted evolution of staff systems in the Canadian Air Force suggests that institutional attention to this subject has suffered. Indeed, practice suggests that the Air Force

might benefit from a more systematized approach to staff work.

This is the second in a series of two articles. The first examined the history of command and staff systems generally. With that as background this second article will trace the evolution of staff systems in Canadian Air Force practice more specifically, and then consider the subject and make some suggestions.



## British Origins

Unsurprisingly, the origins of the Canadian Forces' various command and staff systems are all British, be it the British Army, the Royal Navy, or the Royal Air Force. Up until and during the Second World War, this was not merely a reflection of our history and heritage, it was explicit policy.<sup>2</sup> After the Second World War, all three Canadian services retained, well into the 1960s, the distinct command and staff systems they had inherited from the British. For instance, the headquarters of 1 Canadian Air Division in Europe during the 1950s was organized diarchically with a Senior Air Staff Officer (SASO) and Staff Officer for Administration (SOA).<sup>3</sup> Indeed, at the time of unification, the Royal Canadian Air Force (RCAF) still possessed the staff system we had inherited from the Royal Air Force (RAF).

As discussed in the first article of this series,<sup>4</sup> the British staff philosophies still extant at the time of unification were quite different in many respects from the American continental staff system. There was a thought at the time of unification that along with common uniforms, the new Canadian Forces should adopt a common staff system, and a study was invoked to examine the issue and make recommendations.<sup>5</sup> Nothing appears to have come of that long forgotten effort as throughout the 1960s and 1970s the different staff system in each of the three environments remained largely unchanged from their wartime British antecedents.

## Higher Headquarters Level: National Defence Headquarters

The organization of National Defence Headquarters—and the Canadian Forces Headquarters of the early years of unification—has been through various evolutions over the years, but it was never organized along the lines of the continental system until quite recently. The pre-unification service headquarters all followed their traditional British/Commonwealth organizational patterns, and the pre-unification National Defence Headquarters was a pragmatic grouping, not specifically based upon any staff doctrine.<sup>6</sup> The Canadian Forces

Headquarters of the immediate post-unification era and the National Defence Headquarters, formed in 1972, were similarly expedient in organization.<sup>7</sup>

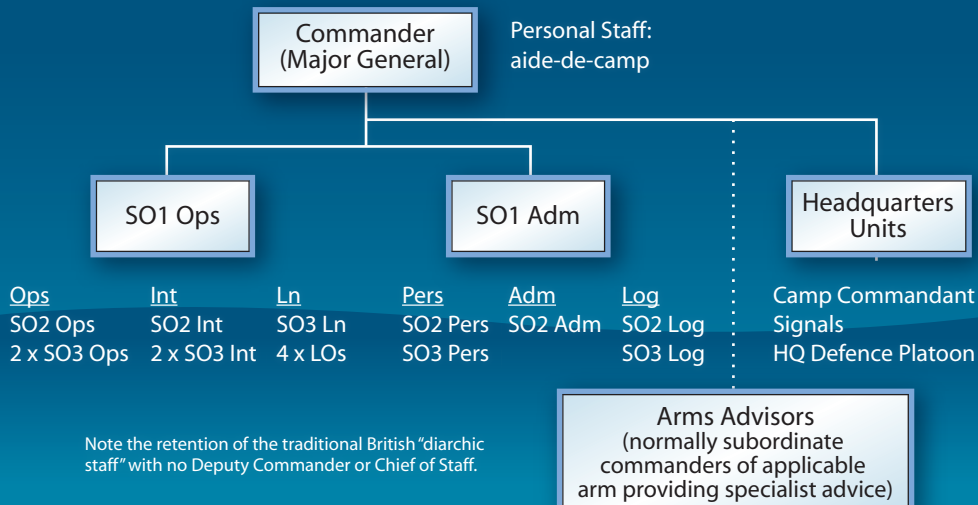
There was some dissatisfaction with this right from the start, which led to a major study of staff systems in the Canadian Forces shortly after unification.<sup>8</sup> However, no great changes were made until the experience of the First Gulf War—the Canadian military's first real war fighting experience since Korea—emphasized that National Defence Headquarters was not organized to exercise effective command of active operations. Reasonably enough, it was then decided to form an operational staff within National Defence Headquarters, and thus was born the Joint Staff or "J-Staff."<sup>9</sup> Interestingly, there does not seem to have been any thought that the J-Staff might be formed as anything other than a continental staff.

The more recent transformation of the strategic level leadership of the Canadian Forces has seen the establishment of a Strategic Joint Staff (SJS), and four operational level headquarters which are organized with continental J-Staffs. Once again, there was apparently no consideration given to using any other system for those operational staffs, a testament to US influence.

## The Army Experience

The Army experience with command and staff systems in the post-war era reflects what became the dominant pattern in the Canadian Forces. Long after WW II, the structure and technique of staff systems in the Canadian Army remained essentially unchanged from the wartime British model, although there was a development of home-grown terms to describe the system. For example, note how the structure of the following 1970s organization for a doctrinal Canadian divisional headquarters (see Figure 1) is organizationally identical to the World War II model;<sup>10</sup> only the position titles have changed.

Figure 1: “Canadianized” Divisional Headquarters, circa 1970s<sup>11</sup>



### List of Abbreviations

Adm	Administration	Ops	Operations
Int	Intelligence	Pers	Personnel
Ln	Liaison	S01	Staff Officer 1 <sup>st</sup> Grade
LO	Liaison Officer	S02	Staff Officer 2 <sup>nd</sup> Grade
Log	Logistics	S03	Staff Officer 3 <sup>rd</sup> Grade

The next evolutionary development in Canadian Army practice was the introduction of the US continental staff system. This appears to have first been introduced in Canadian Forces practice at (what was then) Force Mobile Command (FMC) Headquarters and 1 Canadian Division Headquarters when that headquarters was re-established. By the late 1980s, both were organized as continental staffs with full G staffs and chiefs of staff.<sup>12</sup> As the influence of the US continental staff system spread (in both Canada and NATO), the practice of organizing along the lines of the US system spread down to encompass the brigade group level as well. It is interesting to note that, in the 1990s, when the titles of the continental staff system were adopted at brigade level they were simply superimposed upon what was still recognizably the old British/Commonwealth structure.<sup>13</sup> It was only a few years ago that the brigade group headquarters introduced a chief of staff (of lieutenant colonel rank) and actually

implemented the full form and function of the continental staff system.<sup>14</sup>

### The Canadian Navy Experience

True to its naval heritage, the Royal Canadian Navy (RCN) had a comparatively small staff at the time of unification. It was mostly concentrated in Halifax and was organized along classic Royal Navy /RCN lines. Following unification, this grew into Maritime Command Headquarters, with a subordinate headquarters on the West Coast, as well as some staff at National Defence Headquarters who were primarily associated with procurement.<sup>15</sup> None of these staffs were organized along the lines of the continental system as late as the early 1990s. By the late 1990s, however, even the Navy had succumbed to international influence and had reformed itself as a continental staff. When the environment chiefs were moved to National Defence Headquarters, Maritime



Forces Atlantic (MARLANT) Headquarters and Maritime Forces Pacific (MARFAC) Headquarters were organized according to the continental model. Below this level, Canadian Forces naval staffs remain small and expedient in structure.<sup>16</sup>

### Higher Headquarters Level: The Air Force Experience

The Air Force has had far less experience with the continental staff system than the Army. Originally of course, RCAF organizations followed the traditional RAF pattern (see Figure 2). When Air Command Headquarters was stood up after unification, it too was organized along the lines of what might be termed a “modified RCAF system,” as were the group headquarters.<sup>17</sup> This was still true as late as the end of the 1980s, by which time, as we have seen, the continental system was beginning to seep into Canadian Land Forces practice. The first introduction of the continental system in Air Force practice in Canada appears to have come as a result of the Air Force Command and Control Re-engineering Team (AFCCRT) effort of the mid-1990s, when Air Command Headquarters was reorganized along the lines of the continental staff system as part of the transformation into 1 Canadian Air Division Headquarters.<sup>18</sup>

### Wing Level Organization

As we have seen, after WW II, the RCAF retained the organization and staff system

(shown in Figure 3) inherited from the British. During the “golden era” of the RCAF in the 1950s this was retained, although (as with the Canadian Army) there was a “Canadianization” of terminology. The Wing Commander Flying had become known as the Chief Operations Officer (C Ops O), the Wing Commander Administrative as the Chief Administrative Officer (C Ad O) and the Wing Commander Technical as

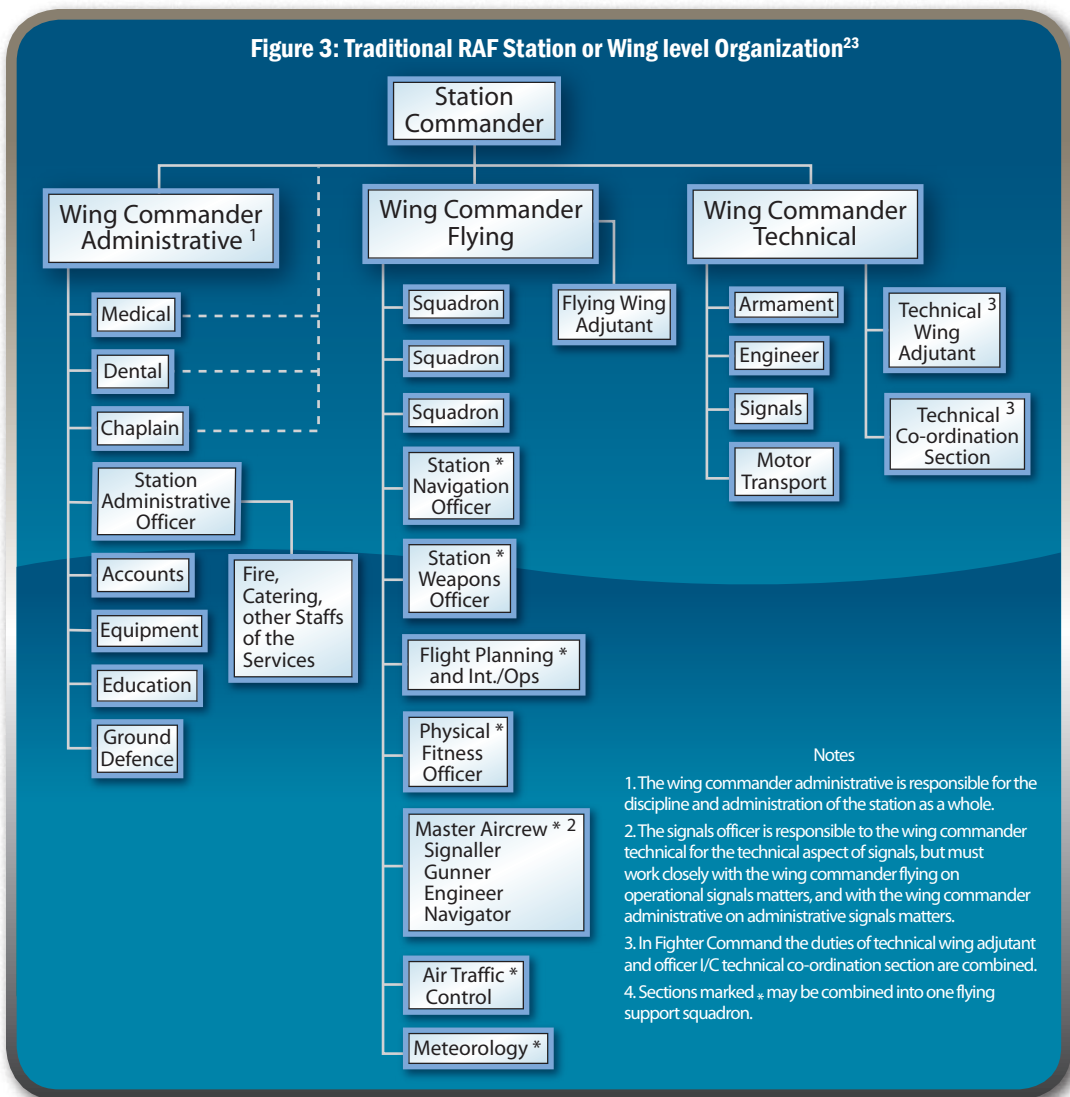
the Chief Technical Services Officer (CTSO).<sup>19</sup> The structural forms and processes, however, were unchanged from the wartime RAF/RCAF pattern until unification.

Based upon the records of organization extant, it would appear that the only significant organizational change made during the 1950s was the separation of the comptroller function. In order to make it a more independent check and balance on finances, it was removed from the administrative organization and made a specialist staff that reported directly to the commander.<sup>20</sup>

Unification brought the first real change as it introduced the “base concept.” A base was defined as a static structure that provided support; it was not in the operational chain of command.<sup>21</sup> The base concept used the traditional RCAF/RAF station structure but used different terminology.<sup>22</sup> It is interesting to note that the other two environments also adopted this structure. C Ops Os became Base Operations Officers (B Ops Os), C Ad Os became Base Administrative Officers (B Admin Os), and CTSOs became Base Technical Services Officers (BTSOs).

The next significant change was an independence movement by the air maintenance function. In the wartime RAF model, this function was grouped under the Wing Commander Technical—subsequently known

Figure 3: Traditional RAF Station or Wing level Organization<sup>23</sup>

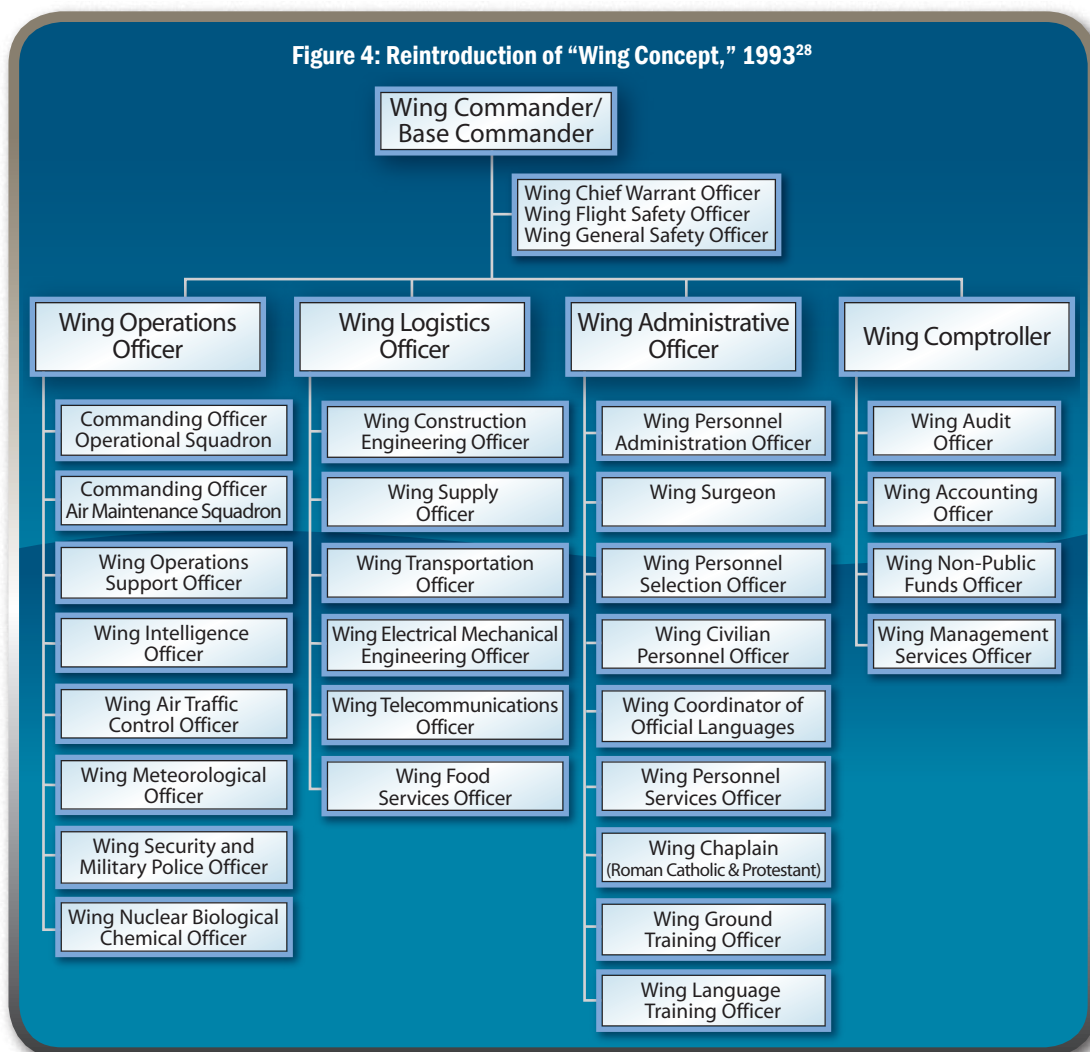


as the CTSO in the post-war RCAF. Soon after the introduction of the base concept, air maintenance (as distinguished from other technical services, in particular ground vehicle maintenance) was consolidated under a “Base Air Maintenance Engineering Officer” or “BAMEO.” The BAMEO was distinct from the other technical services on base but still reported to the BTSO.<sup>24</sup> Then, the BAMEO organization was formed into its own line unit—an “Air Maintenance Squadron” (AMS). Apparently this began in Canadian Forces Europe with the formation of 1 AMS at Baden-Soellingen. Subsequently, AMSs have

been formed as line units in their own right at all of our wings.<sup>25</sup>

The next evolution occurred in the early 1990s, when the “wing concept” was explicitly reintroduced by Lieutenant General Huddleston, the Commander of Air Command at the time.<sup>26</sup> This was done to reverse the effect of the Canadian Forces base concept, which designated bases as static infrastructure units, and specifically to reassert air base commanders’ role in the chain of command.<sup>27</sup> The terminology changed once again, this time from “base” to “wing,” and thus we came to have Wing Operations Officers (W Ops Os)

Figure 4: Reintroduction of “Wing Concept,” 1993<sup>28</sup>



and Wing Administrative Officers (W Admin Os). BTOs were designated Wing Logistic Officers (W Log Os), rather than Wing Technical Services Officers. This organizational structure represented the only significant difference between the new wing concept and the traditional RAF/RCAF system because the air maintenance function was no longer part of the technical services branch, but constituted as line units in their own right. Interestingly, the generic wing organization (see Figure 4) that was produced at the time reflected the traditional RAF three-pronged structure, with the line units reporting through the W Ops O.

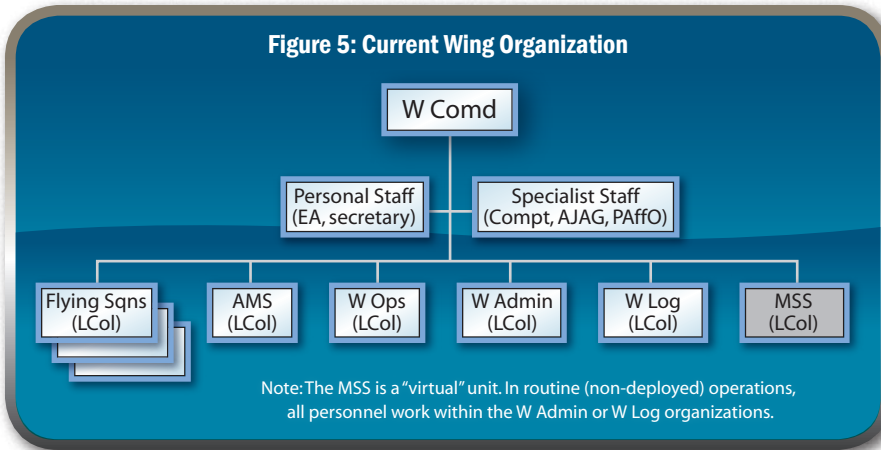
Apparently, as part of the AFCCRT initiative of the mid-1990s, there was consideration given

to establishing A-Staffs (i.e., a continental staff) at wing headquarters level, but this was never followed up.<sup>29</sup> Nevertheless, there has been a creeping introduction of the continental system at wing level by local initiative, but—reflecting a pattern seen elsewhere—this has primarily taken the form of adjusting not the actual structure and working of the system, but simply the position titles. Thus, Wing Operations Officers are now sometimes referred to as “A3s” and Wing Intelligence Officers as “A2s”, but the structure remains unchanged.<sup>30</sup>

The most recent change to wing level organization, see Figure 5, in the Canadian Forces has come about from the Air Force Support Capability (AFSC) project. This has seen the service



Figure 5: Current Wing Organization



support functions of wings grouped together to produce “Mission Support Squadrons” (MSSs), which can be deployed as formed units for expeditionary operations. MSSs combine the functions contained within the Wing Administration and Wing Logistics branches into a single mission support entity, so they represent something of a break from the traditional RCAF organization and the wing concept as re-introduced in 1993.

Figure 5 is somewhat idealized, however, as no two wings seem to be organized exactly the same way. In particular, as mentioned above, there has been a creeping introduction of elements of the US continental staff system into wing level organizations.

**US Influence**

Thus, by a convoluted process, all levels and environments of the Canadian Forces have come more-or-less to adopt the US continental system. There is something of an irony in this. There was an effort in the aftermath of unification to develop a unified staff system.<sup>31</sup> Evidently, nothing came of this well intentioned effort, as a new Canadian Forces staff system never grew out of unification. However, as we have seen, in the convoluted evolution of staff systems in recent decades, a coincidental development has had almost the same effect. From the 1980s onwards, the influence of the US has resulted in almost all Western militaries adopting the continental staff system. NATO has adopted it, indeed, now even the British

and Germans have abandoned their traditional system and adopted it. As we have seen, almost all operational staffs in the Canadian Forces have adopted it. Thus, US influence has achieved what unification never did—a standardization of staff systems across the three environments of the Canadian Forces. In the contemporary Canadian Forces all of the dot-com operational headquarters, the Joint Task Force headquarters, MARLANT and MARPAC headquarters in the Navy, the area and brigade headquarters of the Army, and 1 Canadian Air Division headquarters in the Air Force all utilize the continental staff system, which is now even seeping down into wing level practice (at least nominally).

Another feature of the contemporary practice of continental staffs that bears mention—although it is not by any means unique to the Canadian Forces—is the tendency towards a proliferation in the number of staff branches within the system. In the original US version of the continental staff system, there were only four staff branches, with a proviso for a fifth if necessary.<sup>32</sup> NATO and wider practice nowadays is that “five” is the future plans shop, communications and computers are the sixth branch and doctrine is usually defined as the seventh branch.<sup>33</sup> After that standardization tends to trail off, but many headquarters today have many more branches.<sup>34</sup>

Hittle, for one, argued strongly against such a proliferation:



This system [the continental system], the product of centuries of staff evolution, provides a simple but comprehensive grouping of command and staff functions. Indeed, it is difficult to imagine a function that could not be properly grouped under one of the four general staff sections. ... In the proper application of our staff doctrine [any variations from this standardized organization] ... must be kept in the status of exceptions, or the exceptions will eventually displace the standard system with no system at all.<sup>35</sup>

The argument here is not that other functions do not deserve their own dedicated sections of staff—it is whether those sections should be full branches within the system, or whether it would be more appropriate to fit them within one of the existing branches. The more branches (each with nominal co-equality) in the system, the more diluted and hence less focused and more bureaucratic it will be prone to become.

When considering staff systems, another issue is the advantages of staff parallelism—that is, there being a standardized organization of staffs at all levels so that staffs have readily identifiable opposite numbers at other headquarters with whom they can liaise. In international terms, this is a clear argument in favour of the continental system—it has become the de facto international norm.

### **Vestiges of the Traditional Prusso-British Diarchic Approach Still Discernable**

An interesting theme emerges from the story of this convoluted evolution—it seems clear that notwithstanding reforms and innovations, the actual practice of command and staff work is deeply ingrained in the corporate culture of a military organization, and is somewhat resistant to change. As we have seen, the first step in the introduction of the continental system has often been simply to adopt its terminology, without changing actual organization and practice. Even now, vestiges of the old British diarchic philosophy for staffs are still clearly

visible in the Canadian Forces. Until recently one of the most prominent examples of this was found in National Defence Headquarters. Even though there is a confusing welter of “matrix management,” the Chief of the Defence Staff had two principal subordinates on the staff: the Vice Chief of the Defence Staff and the Deputy Chief of the Defence Staff. And what was the split between their duties? One was responsible for all operations functions, and the other for all administration and support.

Another example within the Air Force lies at the current 1 Canadian Air Division Headquarters, which is nominally organized as a continental staff but has no real chief of staff and does not follow the standard continental staff branches. However, the A-Staff at 1 Canadian Air Division is divided between two Deputy Commanders. These two are titled the “Deputy Commander for Force Generation” and the “Deputy Commander for Mission Support.” The former is responsible for operations issues<sup>36</sup> and the latter for support issues,<sup>37</sup> which de facto if not de jure recreates something of the old British diarchy between operations and support, the two positions that in a traditional RAF or RCAF headquarters would have been called the SASO and the SOA.<sup>38</sup>

### **Consideration**

Does any of this matter? After all, the function of a staff—any staff, regardless of how it is organized—is the same, i.e. to assist the commander with command and control by processing information, offering advice, elaborating plans and orders as well as coordinating and possibly supervising execution. Furthermore, as anyone who has ever worked in a headquarters can attest, commanders and staffs are not simply boxes in an organization chart—they are humans, and the relationships amongst them are therefore always highly personal. The rhythm of activity within a headquarters inevitably reflects the personalities of the key staff principals. Nevertheless, just as it has often been said that “form follows function,” so is the reverse true—function often follows form. The structure of a staff will almost certainly have a major affect upon the flow of information into,

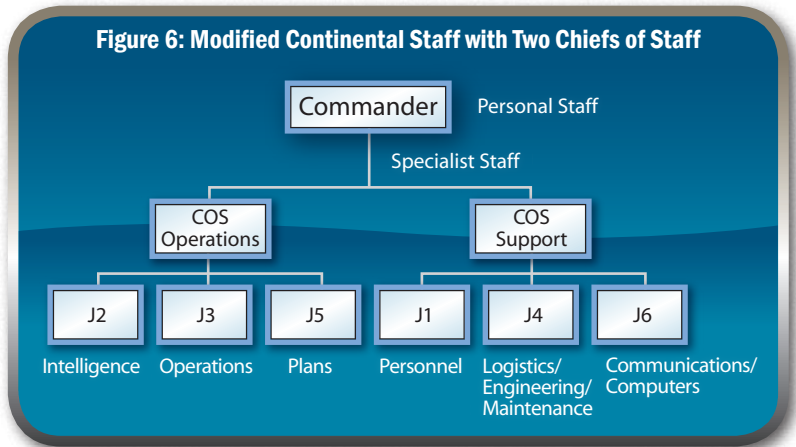
through and out of the headquarters, and thus on that headquarters “battle rhythm” and decision making processes.

In this sense, the fundamental difference in the approach to staff procedure represented by the two historical philosophies of staff systems does matter. The continental system is inherently far more bureaucratic—it formally subdivides processes between at least four (nowadays usually many more) directorates, all of which are at least nominally co-equal. Coordination between these directorates obviously becomes critical, and in the continental system is achieved by a chief of staff. J.D. Hittle, the author of the seminal work in the field of staff systems, considered this a positive virtue, a system of checks and balances.<sup>39</sup>

On the other hand, there is a certain natural elegance to the Prusso-British diarchic system. Having fewer basic parts, it is inherently less bureaucratic and less prone to “stove pipes.”<sup>40</sup> There is something of a natural division between operations and administration. The commander has immediate and unfettered access to advice upon both of those issues. Also, it places commanders more in the centre of the process, making it more likely that they will drive their staffs, rather than the staffs running as autonomous bureaucracies. In this regard, comments made in the Vice Chief of the Defence Staff’s covering letter to the 1972 study of staff systems perhaps makes interesting reading:

[The report should] point up many of the inadequacies, lack of flexibility and duplication which is involved in the so-called “Continental system.” Experience with variations of that system indicate that it leads to bulky and stereotyped structures which are wasteful in manpower and communications.<sup>41</sup>

**Figure 6: Modified Continental Staff with Two Chiefs of Staff**



Even so, given the predominance of the US continental staff system, it would almost certainly be shoveling sand against the tide to try and resist the general international trend in favour of the continental staff system. Interoperability with the Americans almost certainly precludes adopting the Prusso-British system, however much those who admire the elegance of the older system may regret it. Nevertheless, there is a possible compromise. If a headquarters employs two chiefs of staff, one for operations and one for support (see Figure 6), then something of the essence of the older British system is approximated in practice. NATO headquarters often adopts this approach, and as we saw, so does the recently reorganized 1 Canadian Air Division Headquarters.<sup>42</sup>

In fact, boring and arcane as they are, staff systems do matter. A reflection of this was the former Chief of the Defence Staff Gen Hillier’s determination to clarify command (and therefore by extension staff) relationships, and even more importantly to move from a military culture that he has characterized as a “staff-centric” to a “command-centric” one.

## Staff Training

Another point that bears mentioning is the issue of staff training. Traditionally, this has been identified as critically important to an effective staff system. The Germans began the establishment of their general staff by the founding of the famous *Kriegsakademie*, and the British followed suit when they established

Camberley. Both were two year programmes for captains, and the British later added the Imperial Defence College for colonels. Hittle specifically identified staff training as a critical issue; he wrote “Education is the prime requisite of a true staff system.”<sup>43</sup>

As mentioned, at first Canada sent its young officers to those British institutions for their staff training.<sup>44</sup> After the war, equivalent institutions were established in Canada, for the Army at Fort Frontenac in Kingston and for the RCAF at Armour Heights in Toronto.<sup>45</sup> Following unification, the Army retained what became the Canadian Land Forces Command and Staff College (CLFSCS, which is for captains) in Kingston, and the RCAF staff college in Toronto became the Canadian Forces Command and Staff College (for majors). More recently, the Canadian Forces School of Aerospace Studies (CFSAS) was established in Winnipeg to create a staff course for Air Force captains somewhat analogous to CLFSCS.

There has, however, been an interesting long slow dilution of staff training in the Canadian Forces in general and the Air Force in particular. The original staff courses at the German *Kriegsakademie* and Camberley were both two year courses for captains. This has evolved into only six months at Fort Frontenac, and the Canadian Forces Command and Staff Course is only a year, and then for majors not captains. As a partial compensation, the Canadian Forces originally also ran a short staff course for junior officers,<sup>46</sup> but in more recent years even that has been eliminated. CFSAS has floundered a bit since its establishment in the 1990s, most recently going so far as to suspend its staff course for captains.<sup>47</sup> There has also been an increasing tendency for Canadian Forces Command and Staff College students to be senior majors about to be promoted, or even newly promoted lieutenant colonels, which effectively means that there are few if any staff college qualified captains or even majors in the system.

In a similar vein, not only is there less training in staff systems, there is little or no formal

doctrine on the subject either. The Land Force has the publication *Command in Land Operations*,<sup>48</sup> and *Command Support in Land Operations*, which includes a chapter on the principles and organization of the staff,<sup>49</sup> but neither the air nor maritime environments have doctrine for command and staff principles.<sup>50</sup> Perhaps more surprisingly, there is no overall doctrine publication for command and staff systems at the Canadian Forces joint level. While the Land Forces have their publication *Command in Land Operations*, there is no publication titled *Command in Canadian Forces Operations*, although—to be fair—there are eight whole pages devoted to the subject in *Canadian Forces Operations*.<sup>51</sup> The modern Canadian Forces simply has no equivalent to the 1912 *Staff Manual* to elucidate basic command and staff principles.<sup>52</sup> The dearth of formal doctrine and increasing absence of staff training have probably been significant factors in the drift evident in the convoluted evolution of command and staff practice in the Canadian Forces in general, and the Air Force in particular.

## Conclusion

There is a real and significant difference in the approach to command and staff work represented by the traditional Prusso-British system and the continental system. This is a difference that has been largely muddled and lost sight of in the long convoluted evolution of staffs in the Canadian Forces. Nevertheless, somewhat ironically a certain standardization of staff systems has been achieved by the indirect method of copying the Americans. Their “continental system” has become something of a de facto standard throughout all Western militaries. This process has been, however, incremental, and the older “diarchic” system that is bred in our bones tends to show through. The dearth of staff training and doctrine in the Canadian Forces has probably reinforced the tendency to fall back on informal traditions that follow the older British practices. In such circumstances, the inevitable tendency is for commanders and staffs to react to each new pressure reflexively, often without a great deal of thought for fundamental principles or the long

term. The convoluted evolution of staffs within the Air Force—and of wing organizations—has been the result.

Perhaps it is time for the Canadian Air Force to take staff principles more seriously. Why is there no doctrinal template for wing organization? While we may not need or even want to create a Canadianized version of the German general staff corps, we would probably benefit from deciding upon and clearly articulating our basic staff principles in a command and staff doctrinal publication, and providing rigorous training in this for at least selected officers. The British military still distinguishes between officers employed in staff or administrative duties (which, sadly, is most of us) and those who are actually “staff officers” in an operational staff; the latter are designated “SO1s” (lieutenant colonels), “SO2s” (majors) or “SO3s” (captains).<sup>53</sup> The Air Force seems to have lost this distinction. Perhaps it would be helpful if

a cadre of certain positions in the operational staffs at all levels of Air Force were specifically designated in such a way, and officers filling those billets were required to have completed some form of rigorous staff training, beyond that provided generally for Canadian Forces officer professional development. Such a system could see Deputy Wing Operations Officers designated SO2s, with one or two captains working for them as SO3s, as well as a core of designated SO1s, SO2s and SO3s in the A-Staff at the Air Division Headquarters and on the Air Staff in Ottawa. This would necessitate an additional training burden, but it need not be excessive—a total of less than fifty designated billets across the entire Air Force. Such a cadre, strategically planted across the Air Force, could do wonders for our command and staff work. Besides, do we think that since the 1930s, when two year staff courses for captains were the standard, warfare has become more complex, or less complex? ■

## List of Abbreviations

<b>AFCRT</b>	<b>Air Force Command and Control Re-engineering Team</b>	<b>MSS</b>	<b>mission support squadron</b>
<b>AFSC</b>	<b>Air Force Support Capability</b>	<b>NATO</b>	<b>North Atlantic Treaty Organization</b>
<b>AJAG</b>	<b>assistant judge advocate general</b>	<b>PAffO</b>	<b>public affairs officer</b>
<b>AMS</b>	<b>air maintenance squadron</b>	<b>RAF</b>	<b>Royal Air Force</b>
<b>B Admin O</b>	<b>base administrative officer</b>	<b>RCAF</b>	<b>Royal Canadian Air Force</b>
<b>B Ops O</b>	<b>base operations officer</b>	<b>RCN</b>	<b>Royal Canadian Navy</b>
<b>BAMEO</b>	<b>base air maintenance engineering officer</b>	<b>S01</b>	<b>staff officer 1<sup>st</sup> grade</b>
<b>BTSO</b>	<b>base technical services officer</b>	<b>S02</b>	<b>staff officer 2<sup>nd</sup> grade</b>
<b>C Ad O</b>	<b>chief administrative officer</b>	<b>S03</b>	<b>staff officer 3<sup>rd</sup> grade</b>
<b>C Ops O</b>	<b>chief operations officer</b>	<b>SASO</b>	<b>senior air staff officer</b>
<b>CFSAS</b>	<b>Canadian Forces School of Aerospace Studies</b>	<b>SJS</b>	<b>Strategic Joint Staff</b>
<b>CLFSCS</b>	<b>Canadian Land Forces Command and Staff College</b>	<b>SOA</b>	<b>staff officer for administration</b>
<b>CTSO</b>	<b>chief technical services officer</b>	<b>W Adm O</b>	<b>wing administrative officer</b>
<b>FMC</b>	<b>Force Mobile Command</b>	<b>W Log O</b>	<b>wing logistic officer</b>
<b>MARLANT</b>	<b>Maritime Forces Atlantic</b>	<b>W Ops O</b>	<b>wing operations officer</b>
<b>MARPAC</b>	<b>Maritime Forces Pacific</b>		

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## Notes

1. See for instance Carl Builder, *The Icarus Syndrome* (New Brunswick, NJ: Transaction Publishers, 1994) and James Mowbray, "Air Force Doctrine Problems: 1926-Present," *Airpower Journal* (Winter, 1995) or, from closer to home, Colonel P.J. Taggart "A Working Paper on Proposals for the Development and Dissemination of Air Force Doctrine" *Air Doctrine Symposium, Summary Proceedings* (Canadian Forces College, 1994).
2. Military practice in Canada was expressly standardized with the mother country's. All Canadian doctrinal manuals were reprints of British originals, and we sent our brighter officers to staff college there. See for example Maurice Pope *Soldiers and Politicians* (Toronto: University of Toronto Press, 1962), 53.
3. Senior Air Staff Officer was the senior staff officer responsible for operational matters and Staff Officer Administration was the senior staff officer responsible for support matters. See the first article in this series: Paul Johnston "Staff Systems and the Canadian Air Force: Part 1 – History of Western Staff Systems," *The Canadian Air Force Journal* 1, no. 2 (Summer 2008), and Figure 2 in this article.
4. Paul Johnston "Staff Systems and the Canadian Air Force: Part 1 – History of Western Staff Systems." *The Canadian Air Force Journal* 1, no. 2 (Summer 2008). 5. Directorate of Management Advisory Services (DMAS), "Canadian Forces Staff System" (DMAS Study No. 1951-100-70/4, October 1971, copy on file in the RMC Library, hereafter cited as: DMAS "Canadian Forces Staff System").
6. R.L. Raymont, "The Evolution of the Structure of the Department of National Defence 1945-68" Report to the Task Force on Review of Unification of the Canadian Armed Forces. (DHH 87/47, also, a copy on file in the Canadian Forces College library).
7. DMAS "Canadian Forces Staff System," Vol 2, Annex G; Raymont, "The Evolution of the Structure of the Department of National Defence 1945-68"; Bland, *National Defence Headquarters: Centre for Decision*, (Ottawa: Department of Public Works and Government Services, 1997).
8. DMAS "Canadian Forces Staff System," Vols 1-4.
9. For the story of the establishment of the National Defence Headquarters J-Staff, see Todd Fitzgerald and Dr Michael A. Hennessy, "An Expedient Reorganization: The National Defence Headquarters J-Staff System in the Gulf War," *Canadian Military Journal* (Vol. 4, No. 1, Spring 2003) and Sean M. Maloney, "Purple Haze: Joint Planning in the Canadian Forces from Mobile Command to J-Staff, 1975-1991 (Part 1)," *Army Doctrine and Training Bulletin* (Vol. 5 No. 4, Winter 2002-2003).
10. Figure 3 of the first article of this series, Paul Johnston "Staff Systems and the Canadian Air Force: Part 1 – History of Western Staff Systems." *The Canadian Air Force Journal* 1, no. 2 (Summer 2008): 23.
11. Drawn from *Staff Officers Handbook 1974*, Canadian Army Staff College, Fort Frontenac archives, Kingston. Note that at that time there was no divisional headquarters in the Canadian Forces; this was the theoretical organization used for training.
12. 1 Canadian Division Headquarters was structured according to the continental system upon its reestablishment in 1988. See Jack Dangerfield, "1<sup>st</sup> Canadian Division: Enigma, Contradiction or Requirement," *Canadian Defence Quarterly* Vol. 19, No. 5, (Spring 1990): 7-14, which outlines the re-establishment of that headquarters. The author has been unable to date the adoption of the continental system at Force Mobile Command (FMC) Headquarters precisely, but it was already well established there as of 1992, when the author was posted to that headquarters.
13. For instance, the old "Brigade Major" was simply retitled the "G3" while still keeping the same structure and processes as outlined in Figure 4 of the first article of this series, Paul Johnston "Staff Systems and the Canadian Air Force: Part 1 – History of Western Staff Systems." *The Canadian Air Force Journal* 1, no. 2 (Summer 2008): 23.
14. Email to the author from LCol Shane Schreiber, then the 1 Brigade Group Headquarters Chief of Staff, 14 February 2005.
15. DMAS "Canadian Forces Staff System," Vol 1, 43-44.
16. Email to the author from Cdr Josh Barber, then Commanding Officer of TRINITY, 9 August 2005.
17. For instance, an Air Command document from 1987 summarized the situation extant at the time. 1901-03 (SSO OE) "A Position Paper on the Air Command Organization Structure" 25 March 1987, drafted and signed by (then) LCol D.M. Westrop (personal copy in the author's possession, from the private papers of Col D.M. Westrop [Ret'd]). See also, Allan English and John Westrop, *Canadian Air Force Leadership and Command: The Human Dimension of Expeditionary Air Force Operations* (Trenton: Canadian Forces Aerospace Warfare Centre, 2007), 57.
18. The author can find no evidence of a continental staff being employed in Canadian Air Force practice prior to the AFCCRT reorganization of 1995-1997, which was clearly the initiative that created an A-Staff for 1 Canadian Air Division Headquarters. See, Allan English and John Westrop, *Canadian Air Force Leadership and Command: The Human Dimension of Expeditionary Air Force Operations* (Trenton: Canadian Forces Aerospace Warfare Centre, 2007), 69. The preceding Air Command Headquarters had not been organized as a continental staff, email to the author from Col Westrop (Ret'd), who had been posted to Air Command Headquarters. The author can attest from his time in Baden-Soellingen that the original 1 Canadian Air Division Headquarters (based in Lahr) was not organized as a continental staff.
19. This is based upon various anecdotal recounts of the terminology of the era, in particular in a personal email from LGen D. Huddleston (Ret'd) [who joined the RCAF in 1960], to the author.
20. DMAS, "Canadian Forces Staff System," Vol 1, 31 and p 37. This change was made in all three services around the same time.
21. This arrangement, although derived largely from RCAF practice, became a major irritant to Air Command. See, Allan English and John Westrop, *Canadian Air Force Leadership and Command: The Human Dimension of Expeditionary Air Force Operations* (Trenton: Canadian Forces Aerospace Warfare Centre, 2007), 63-65.
22. Canada, DND, *Organization Concept for the Canadian Forces* (Ottawa: Canadian Forces Headquarters, 1967), 9-12.
23. DMAS, "Draft Report on CF Staff System," Vol 4, 51.
24. Or reported to the Base Commander in parallel with the BTSO; practice appears to have varied.
25. The AMSs are now numbered to reflect the number of their parent wing, with the exception of 1 AMS in 4 Wing, which perpetuates the original 1 AMS from Baden-Soellingen.
26. This initiative was explained in a special booklet produced by Air Command Headquarters at the time, "The Formation of Wings in Air Command" (Winnipeg: Air Command Headquarters, 29 April 1993). A copy is available from the office of 1 Canadian Air Division Official Historian. For the official plan see "Master Implementation Plan for the Wing Concept," (Winnipeg: Air Command Headquarters, 1993).
27. AIRCOM, "The Formation of Wings in Air Command," 1-2 and 6-9. For a trenchant analysis of this reorganization, see Allan English and John Westrop, *Canadian Air Force Leadership and Command: The Human Dimension of Expeditionary Air Force Operations* (Trenton: Canadian Forces Aerospace Warfare Centre, 2007), 66.
28. This figure was included as an example generic wing organization, AIRCOM, "The Formation of Wings in Air Command," 10.
29. Allan English and John Westrop, *Canadian Air Force Leadership and Command: The Human Dimension of Expeditionary Air Force Operations* (Trenton: Canadian Forces Aerospace Warfare Centre, 2007), 69.
30. For example, contrary to the continental staff system, the "A2" reports to the "A3."
31. DMAS, "Canadian Forces Staff System," Vols 1-4.
32. This original fifth branch was civil-military affairs. J.D. Hittle, *The Military Staff: Its History and Development* (Harrisburg, PA: The Stackpole Company, 3rd Edition, 1961), 212.
33. The belief that there is a need for a branch in an operational staff dedicate to doctrine is interesting.

34. The record that this author has seen is a J13, which was "computer modelling and simulation" at a headquarters that shall remain nameless.
35. Hittle, 221.
36. With responsibility for the A2, A3 Aviation Patrol and Transport, A3 Aerospace and Force Protection, and A5. See [http://www.airforce.forces.gc.ca/site/orgdocs/organization2\\_e.asp](http://www.airforce.forces.gc.ca/site/orgdocs/organization2_e.asp) (accessed March 28, 2008)
37. With responsibility for the A1, A4 Logistics, A4 Airfield Engineering, A4 Maintenance, and A6.
38. See Figure 2 above.
39. See note 49 of the first part of this series, Paul Johnston "Staff Systems and the Canadian Air Force: Part 1 – History of Western Staff Systems." *The Canadian Air Force Journal* 1, no. 2 (Summer 2008): 30.
40. "Stove-pipes" in this sense meaning a tendency for issues to be addressed by separate "tech nets" rather than a single unified staff.
41. LGen M.R. Dare, 1901-95 (VCDS) "Draft Report on Canadian Forces Staff System," February 2, 1972, paragraph 2 (the covering letter to DMAS "Canadian Forces Staff System")
42. The 1 Canadian Air Division Headquarters A-Staff is divided between two Deputy Commanders, one responsible for operational issues (known as the Deputy Commander Force Generation) and one responsible for all support issues (known as the Deputy Commander Mission Support). See notes 36 and 37.
43. Hittle, 306.
44. Or to the British staff college at Quetta, in India (now part of Pakistan).
45. Once again reflecting traditional attitudes, the RCN did not establish a staff college.
46. The old Canadian Forces Staff School (not college) course.
47. Recent problems with Canadian Air Force Professional Military Education (PME) are discussed in Allan English and John Westrop, *Canadian Air Force Leadership and Command: The Human Dimension of Expeditionary Air Force Operations* (Trenton: Canadian Forces Aerospace Warfare Centre, 2007), 89-92.
48. B-GL-300-003/FP-001, *Command in Land Operations*, 2007-07-27.
49. B-GL-331-001/FP-001, *Command Support in Land Operations*, 2006-07-04, Chapter 2.
50. There will, however, soon be Air Force doctrine on the subject as the author is at the time of writing working on the project.
51. B-GJ-005-300/FP-000, *Canadian Forces Operations*, Change 2, 2005-08-15 Chapter 2.
52. Indeed, a reading of 1912 *Staff Manual*—which contains a wealth of both common sense and insight—is still beneficial for serving staff officers today.
53. Not all majors engaged in office work are "SO2s" – only those employed in specified positions on operational staffs. This is one of the last vestiges of the 1912 staff system in modern British practice. An SO1 (Staff Officer 1<sup>st</sup> Grade) is the modern equivalent of a GS01, etc.





# Dilemma of Air Power

Address delivered before the Canadian Club of Montreal

by Air Commodore Clare L. Annis.

Originally published in Roundel 5, 3 March 1953, pages 3-7

March 17th, 1952

Mr. chairman and gentlemen:

I appreciate deeply the honour of your invitation to address you, and I am very happy to be here.

In looking over your list of past speakers I noted that an airman has not appeared for some considerable time. It therefore seemed you must have invited me, an Air Force officer, because you wanted an airman's views on an air subject incorporated afresh into the broad field of subjects in which the Canadian Club maintains such heartening interest. It occurred to me I perhaps might best serve your wishes for such a purpose by taking the problem of the best employment of air power as our subject.

In this discussion I will try to give you a sort of summarized cross-section of the views on this question as expressed through the full range of military levels by competent groups and individuals who represent the air strategist's side. The views I am expressing are not official. I repeat that they represent only my selection of arguments. You will have to draw your own conclusions.

The student of air strategy points out that a living history of the employment of air power in the direct support of armies is already well recorded in such widely read books as General Eisenhower's "Crusade in Europe" or General Bradley's "A Soldier's Story," and many more by writers whose personal military backgrounds are Army. Little more is left to tell about the employment of air power from a soldier's viewpoint. But the history of the employment of air power as an entity, has never been really recorded and made available for all people to read and absorb. We airmen have done a poor job, so far, of presenting on a large scale and in comprehensive, coherent, interesting and easily grasped forms the Second World War history and lessons of air power. There has been no real record published yet, except for air power in a tactical form, about the roles, the compositions, the patterns of application, the strengths, the weaknesses and the language of air power as an entity; or of what combinations of aircraft types, balances of armed forces, procedures and situations represent waste or outright peril to air power, or of those which represent the most effective forms and goals for deterrence or the destruction of an enemy. The most used and quoted documents, the United States Strategic Bombing Surveys in Europe and in the Pacific, are just records of results achieved, not of situations and lessons to be used as signposts in the present or future. So far as I know, nothing at all has been published about air power in strategic defence. The books that have been published to date have been more or less mere diaries; and one well-known one at least, is mostly a diatribe. Seversky's books point many real lessons; but they are not analytical histories. They are the expositions of a remarkable visionary, going on ahead.

Yet more air history by far has been made than any other kind of military history in the last fifteen years or so. The airman, the German airman in Poland, opened the last war. From then until V-E Day, nearly six years later, the airman's war was nonstop. For three years he was alone over Europe, while our land forces' history was comparatively dormant. In the Pacific the airman, this time Japanese, opened

the war; and American airmen closed it down after five unbroken years of making air history.

We airmen, especially in the strategic application of air power, made many real mistakes, and therefrom learned many real lessons. Most problems we met were brand new. We were guilty of numerous wrong estimates; and we started off in several wrong directions. We explored and exploded many theories. And yet all things considered we probably did more right things rightly whenever we got the use of our aeroplanes to apply air power as we saw fit, then any of the armed services. We are sure we produced, alone or as the major instrumental power, many more decisive military results for less expenditure, and with more savings in Allied lives and material, than did either of the other Services. Never was so much air history made; and never was so much tactical air history and so little strategical air history told. In our Air Force Staff Colleges in Canada, the U.S. and the U.K. we have by now collected, researched and analysed enough excellent material that we know a story vital to all of us is available for the publishing. One of our problems is to interest capable and perceptive writers to put it into books in the forms I have already mentioned. There is a great need here; and a great service still to be done.

The direct air support of armies, or in other words the tactical role of air power, is as old as is the history of the aeroplane in its use as a fighting vehicle. Employment in this role really demands of air power that it support [*sic*] the army concept, or as I shall call it, the surface concept of grand strategy in the conduct of wars. If airpower [*sic*] cannot convince itself that the surface concept is the best one from an overall viewpoint, then airpower [*sic*] finds itself employed in an invidious and vitiating position. The position becomes the dilemma of air power.

In broad terms, the ultimate goal of surface concept is the seizure and occupation of the enemy homeland with troops. This is recognized everywhere as a positive way of bringing a war to a successful conclusion. The surface concept is interested primarily in



the acquisition of ground; in at least holding essential ground during build-up, and then step by step seizing new ground until the homeland of the main enemy is invaded and overrun. In surface concept the role of tactical air forces in particular, and of all air power in general, is to assist in the most direct way, in the ground battles of the land forces as they progress towards the enemy heartland. It is understood that all Supreme Commanders will be indoctrinated and guided by the basic goals of surface concept, and will therefore divert air forces from their strategic tasks as necessary to keep the surface concept rolling.

Let me give you an example from the last war—one of many examples—of such diversion. In March, 1944, right in the midst of the decisive series of battles for air supremacy over Germany, and while the outcome was still much in doubt, the United States Strategic Air Forces in England were forced to yield 19 out of their total of 34 offensive fighter groups, to form the United States 9th Tactical Air Forces. These 19 groups were taken away to practice direct Army support techniques while the remaining 15 groups went on escorting the heavy bombers, in the bitter struggle for the air supremacy essential to make the Normandy landings possible. The fact that we won the air supremacy anyhow can, in retrospect, be clearly credited as much to German failures to think in air concept as to our own cleverness.

The air concept approaches the problem of winning wars with the ultimate goal being to exploit freely the air over the enemy homeland with air weapons. They feel air invasion and air exploitation of the air over an enemy homeland is fully as positive a way of bringing a war to a successful conclusion as is the ground concept method of invading on the ground and occupying the enemy homeland with troops. For substantiation the exponents of air concept turn to the strategic air history of the last war. The documents available to the public which give most thoroughly the statistics and results achieved by strategic air in the offensive role are the United States Strategic Bombing Surveys in Europe and the Pacific.

The climactic arguments are to be found in the final and overall conclusions to the Survey in the Pacific, which was completed after the Survey in Europe. The conclusions read: "The experience of the Pacific War supports the finding of the Survey in Europe, that no nation can long survive the free exploitation of air over its homeland."

The exponents point out that the length of time even a powerful nation can survive under full and free exploitation of air weapons over its homeland is very much shorter than is generally realized. Air concept points out that strategic air power had no real previous war experience as a guide, and it had to learn as it went along. They admit freely that the theory of area bombing against German cities and morale was tried first and, overall, it failed. But, by mid-1944 the strategic target studies necessary for selective strategic bombing against several fundamental industries such as oil and chemicals had been completed; and this form of scientific application only began in September 1944. The final conclusions of the Survey in Europe say "By the beginning of 1945, before the invasion of the homeland itself, Germany was reaching a state of helplessness. Her armies were still in the field, but they would have had to cease fighting within a few months. Germany was mortally wounded." In other words, about only four months after September 1944, Germany was mortally wounded by strategic air power exploiting freely the air over her homeland. The air concept exponents would have you note especially that it was not airmen who wrote out these conclusions. It was 300 impartial, carefully selected civilians with not an airman among them, using empirical, on-the-spot evidence. The air concept disciple offers as his clinching argument that in the the [*sic*] interval since the Strategic Bombing Surveys were completed, the introduction of the atomic bomb has increased the destructive load of each heavy bomber at least three thousand fold. In other words, the potential destructive load-carrying capacity of only 10 bombers today is, in some respects, the equivalent of at least 30,000 bombers in September, 1944.

In air concept, air power, land power and sea power collectively are united in their grand strategies to attain the end goal of air concept by the quickest, cheapest and least risky means.

The value of ground forces in air concept is just as great as is that of air forces in surface concept. Ground forces are envisaged as full scale forces responsible for the vital tasks of holding ground and when necessary or timely, of seizing new or occupying yielded ground. Air concept recognizes that only armies can hold or seize ground. Furthermore, air concept is aware of how essential is air power to armies in the holding or seizing of vital ground, and on its own volition makes provision for such assistance. But air concept expects that plans for seizing new ground, unless they are politically or economically vital at the time to the whole war effort, will be measured against the yardstick of whether they are worth the delay or risk to achievement of the air concept goals.

The lessons of strategic air history dictate that, the same as in surface concept, the inexorable first task that faces airpower [*sic*] is the gaining of air superiority, but unlike surface concept, not just over the battlefield. It has to be over all the paths of approach to all vital targets in the theatres being defended.

The first phase of the strategic air battle for air superiority is the destruction of enemy air power in being. This is primarily the task of fighters and light bombers; and in a wholly defensive way, of anti-aircraft artillery. The second phase which begins before the first one ends, is the destruction of enemy air power in prospect—that is, his main aircraft and electronic factories, or the equivalent. It involves transferring more accent to bombers. The third phase also overlaps the first somewhat and the second considerably. It is the immediate exploitation of air victories in the first two phases. It transfers still heavier accent to bombers and it grows into full exploitation of the air over the enemy's homeland.

The deployment of air forces in air concept is guided by the requirements for defence against

enemy strategical air *and* land invasion; and by the requirements for our own strategical air invasions towards the enemy's vital targets.

The command and control aspect in air concept would be designed primarily to ensure the greatest flexibility of air power so that the most air power possible could be applied most quickly to any targets vital to the enemy's war effort, whether they were his basic war economy or concentrations of his armed forces. The result is that air forces are envisaged as being organized broadly into two main groups at the beginning of a war, the strategic offensive and the strategic defensive, with all of both groups trained to a considerable extent in the support of land forces, but with portions of each specialized in this respect, and earmarked for tactical employment. As and when the air superiority situation improved, more and more airpower [*sic*] would be available for allocation to the direct support of armies if the seizing or the occupying of new ground seemed necessary within the terms of air concept. Air history teaches that once decisive air superiority has been achieved—but not before—all things military become possible.

So far I have not mentioned sea power, the reason being that its role does not enter as a contentious question into this debate. Sea power's role—the securing and maintaining of the lines of sea communications—is the same in both concepts and it is vital.

Surface concept sees air power only as it modifies surface forces problems. Air concept gives us so much wider a view of the goals, the balances and the priorities among not two plus a fraction, but all three armed services. Air concept is all of surface concept, but with depth. It gives the advantages of perspective. We come to see a lot of things we didn't see before; and as a result we are persuaded to put a different and better emphasis on right things at the right time.

Let me illustrate with an example everyone of you undoubtedly saw and yet scarcely a one of you, I am sure has seen. While it was



happening, surface concept, like a magician, kept your attention rivetted on the priorities and the dangers that surface concept emphasizes while all the time something even more significant was actually happening. Obviously only air concept noticed it.

You will recall the situation for several days on the beaches of Dunkirk, in June 1940, where some 300,000 men of the British Expeditionary Forces, pressed against the English Channel, all hope of saving their equipment abandoned, were awaiting their evacuation by sea. In this dire predicament Mr. Churchill, whether or not he was aware of its full risk, made a fateful decision. He, with full accord of the Royal Air Force, ordered the Royal Air Force to put up and to maintain the maximum continuous fighter cap over the beaches at Dunkirk. For the Royal Air Force this meant putting every available fighter squadron, the complete air defence forces of Great Britain on the line. To maintain the fighter cap continuously, and Mr. Churchill's order was absolute, meant that the Royal Air Force, what with only about 25 fighter squadrons available altogether, and with just a few based on aerodromes close to the coast, could maintain not more than about two squadrons on the cap over the beaches at a time. The German High Command thereby had a second target available for destruction; not only the British Expeditionary Force on the beaches, but in addition the entire RAF Fighter Force presented at only two squadrons at a time, overhead. Which should he choose to destroy?

The German had about a dozen aerodromes within working range of Dunkirk, giving room for about 20 squadrons. He had about a thousand Stuka dive bombers designed for ground attack and about 1500 fighters available, enough to fill up all his aerodromes with *either* type. Should he fill them with Stukas to attack the B.E.F. or with fighters to attack the R.A.F.? It is our conviction that the German High Command recognized only the British Expeditionary Forces as a worthwhile target. They certainly did not think like air concept. They emphasized like surface concept; and using this emphasis as a guide, the German filled up his

forward aerodromes with dive bombers and his rear airfields with fighters. He even gave orders to *his* fighters *not* to go after our fighters but instead to escort the dive bombers while the dive bombers attacked the troops on the beaches. Thus his fighters were even placed in the tactically much inferior position of a defensive role. The results were that not only the British Expeditionary Forces escaped, but still more important to our mind, so did the Royal Air Force. For more than the next three years while our Western Armies awaited a favourable conclusion to the struggle for air supremacy the "few" went on to the fighter defensive victory in the Battle of Britain, then grew to the fighter offensive over France, then to the Bomber offensive, then to round-the-clock bombing, then to victory over Europe. Five years after Dunkirk, German Field Marshal Kesselring declared: "Allied air power was the greatest single reason for German defeat," and German Production Minister Albert Speer stated: "the war was decided by attacks from the air." It seems easy to deduce which target THEY would have insisted on destroying at Dunkirk if only they could have turned back the clock five years! They had learned a lesson about air concept.

The lessons of air history say that in 1940 our air power was not established either properly or enough, in Europe, and our ground forces were quickly shown by German air power and armour that Europe was not a safe place for the soldier to be in alone. Thereupon our armies waited for three years while the airman and sailor fought to make Europe once again safe for the soldier. The armies followed air power back into Europe; and armies followed air power into Japan; but in each case only after the airman and the sailor agreed it was safe. The airforces [*sic*] did not follow the armies. Air concept says this is a principle of which we must never lose sight, even in cold wars.

The airman's and the soldier's interpretation of air history is in complete agreement that the very first role of air power is to win air superiority, although each has his own differing reason about where and why. Apparently the

Russians agree with this too, because they are putting tremendous emphasis on fighters, the aeroplane type which is most involved in winning air superiority. Mr. Stalin wrote once in a letter to Mr. Churchill: "Even the bravest troops are helpless if they lack air protection." Obviously our powers of deterrence, defensively, will depend very largely on how much air protection our troops are thought to have available.

Air power says the only way it knows to win air superiority is by destroying enemy air power. Air history says, that for all practical purposes, *only air power can defeat air power*. The airman is all alone in the air battle. The air forces and the air reserves in being at the time represent all the reserves. Unlike surface concept in which after air superiority is won, the ground forces cannot exploit it until after another battle or battles—the ground ones—have been fought, the air forces exploit their victories so quickly that the three phases all overlap. The diversion of air forces into a ground battle may save a perilous situation; but there is no direct way of diverting ground divisions to save a perilous situation in the air battle. Air forces are dual purpose; and in our everyday lives we buy or build the dual purpose item if we cannot afford both items at the same time.

There are so many vital lessons that air history teaches! Another lesson is that real air defence is possible, though history point [*sic*] us no way of making air concept inexpensive. It only shows how to make it much, very very much, less expensive. The study of the German history of air defence shows us right through the war how miraculously fortunate we were that the German High Command did not listen to its airmen who thought as air concept does. If they had, there would have been a much longer period not only of air but also of general war history. Air history tells us that air power will always in the overall sense defeat the missile fired at it from the ground, the reason being that air power has the freedom of choice in time, in concentration and in manoeuvre against weaknesses. To be fair, it says also that

concentrations of ground defences do tend to force the bombers into concentrations for the offence, but the original principle still applies. Future ground defences may force the bomber to launch his television-controlled and rocket impelled bombs further from his target, but we have no change in principle. Ground defences are a help to strategic and tactical defence, but air history helps us in the question of priorities and to look for dual purpose weapons. And so on, for lessons of air history. But my time is running out and I want to close on a theme I mentioned earlier.

Air concept is a wider vision. Surface concept hides because it distracts. Surface concept has already made the public well aware that communism has powerful armies, while the true picture, easily available but well distracted, is that imperialistic communism also has air forces equally powerful in overall ratio. The true lessons of Korea are not that Russia has day fighters as good as ours. It is that she has so many excellent fighters so much sooner than we expected. The same is true for her radar. Another is that during the truce talks, not only has she been building up ground forces; but the north side of the Yalu river is a giant fighter training school, compared with which, any real war training schools we have, are peanuts; and that the United Nations are quite unwillingly and involuntarily, but nevertheless actually, providing the instructors. Another lesson is that our Western powers of deterrence with our strategic air forces are being eaten away as Russian defensive powers rise; and that the bottleneck for us in maintaining deterrence, through an obvious ability to make quick reprisal, may well be not only the stockpile of atomic bombs, but even more the stockpile of high performance bombers. There are only three Western nations with the know-how, materials and the relatively safe global location to build them.

Surface concept emphasizes in nearly every newspaper and press release these days the importance and need for haste in build-up of troops in Europe. Air concept does not seek



to deny nor hide this fact, but I have already covered what else it does show. Surface concept distracts the public by stressing that the main role of our air forces in Europe is to support our armies, which is true only in that it is a part truth. But air concept says the whole purpose of our air forces in Europe is to protect Europe against air invasion which can so quickly wound mortally, and make the purpose of further defence against ground invasion, not only almost impossible but largely meaningless. The purpose of our air forces on this continent is to protect us here in the same way from air invasion. But air history shows that where there is strong air superiority there is no surface invasion over water.

Surface concept divides airpower [*sic*] into three groupings. Surface concept, with noble purpose but unwittingly, exposes air power to destruction by division. Air concept concentrates them into two interlocked groups; and the tighter the supply of air forces, the more air concept strives to shun penny-packaging, and the peril of destruction in detail. The tightest supply of air forces in our democratic way of life has always been at the beginning.

These are the dilemmas of air power. How ever [*sic*] to achieve the profound burden which the free world instinctively looks to air power to perform unless air power can persuade the majority to accept the wider emphasis of air

concept which is there for the asking. We airmen have fallen down in our history writing, in that it is not there for the taking.

Finally, air concept is designed to be neutral in its viewpoint. It wants to sit in among all three armed services, mutually owned, and being eminently fair to each. It does not strive to be a dominating minority. It wants to be indistinguishable with the majority.

But the last lesson on the last page of air history brought right up to date is that air concept is still *such* a minority—a highly distinguishable minority in history books, in the press, in industry, among the people, among the elected representatives, among key officials, among Supreme Commanders, among NATO military councils, among nations which have no real air history of their own and yet have equal votes on the matter of concept. Have you ever looked seriously at this question through the eyes of air concept ?

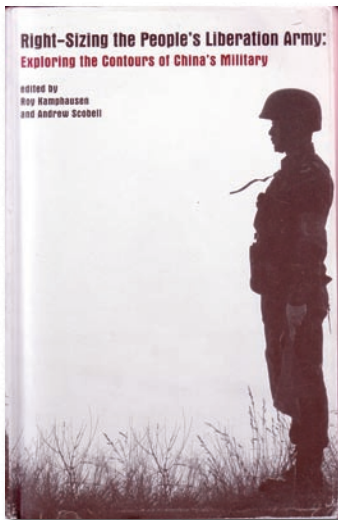
If when you go back to your offices today, you should spend a few moments making a list in any category I just mentioned, you may well be moved to recall Mr. Churchill's famous phrase about the Battle of Britain written on a much earlier page, "Never was so much owed by so many to so few." We hope you will write on today's page—"too few."

Thank you. ■



CF Photo

# BOOK REVIEWS



## RIGHT-SIZING THE PEOPLE'S LIBERATION ARMY: EXPLORING THE CONTOURS OF CHINA'S MILITARY

**EDITED BY ROY KAMPHAUSEN  
AND ANDREW SCOBELL**

CARLISLE, PA:  
STRATEGIC STUDIES INSTITUTE, 2007  
582 PAGES ISBN 1-58487-302-7

Review by Richard Desjardins

As any seasoned observer of the Chinese scene will know, the People's Liberation Army (PLA) is in the midst of its deepest transformation in memory. It would be difficult to exaggerate the magnitude of the changes taking place when we know where the PLA was in 1976, when Chairman Mao died, and what the situation is today. Describing the current transformation as a *revolution in military affairs*, to use a popular term these days, is an understatement. If China is emerging as an economic power, the same cannot be said of its military. Not yet. However, as the book under review shows, the Chinese military is clearly aware of its inferiority and is working on filling the gap.

The Strategic Studies Institute of the US Army War College has been holding an annual conference on the PLA for a number of years now. On every occasion, the papers discussed at the conference have been published in book format. The book under review is the result of the 2006 conference. The fifteen contributors are all seasoned observers of the PLA. The field

has matured to the point where we can truly refer to it as *PLA studies*. If in the mid-1990s research on the PLA tended to have a general focus due to lack of precise information, then today the increasing openness of the Chinese military allows for greater specialization. The book under review is a clear indication of this change.

The driving issue of the 2006 conference was determining the appropriate size for China's military. The growth of Chinese defense expenditures in the past ten years has been the object of increasing concerns by the US military. Average annual increases of 15% in the past decade have led the US to question the motives of the Chinese government. Is China seeking to ascertain a regional stake or is it aiming to challenge the United States outright? In order to address these issues, the conference attendants have tried to identify China's short, medium, and long-term threats and to measure them against other priorities of the Chinese government. The result has been the elaboration of a

number of scenarios each outlining the form and size the Chinese military might take.

Modernizing the military was not a major priority of the Chinese government when the reformers consolidated their power in 1978. Rather, the focus was opening the economy to the outside world, downsizing the Chinese bureaucracy and privatizing state corporations. Beginning in 1985, the PLA was ordered to trim its ranks as well. By 2010, PLA ranks will have lost two million soldiers as a result of this reform. The resulting savings will have been put into increasing wages and buying new equipment.

The book under review provides a clearer picture of the priority areas facing the Chinese government. Ironically, the current external environment offers China a peace that it has not seen in a long time. Russia, its rival for many years, has also rearranged its priorities. Both countries are focusing on their respective domestic situation and now see each other as partners. The United States is no longer involved in a war on China's immediate borders (i.e. Vietnam and Korea) and both countries are increasingly integrated economically.

Rather, the threats facing the Chinese government are domestic. They include separatism in Tibet as well as Xinjiang (the northwestern autonomous region inhabited by the Uighur minority) and the instability caused by growing disparities in income between the coastal and inland provinces as well as between the rural and urban areas. These threats, according to the contributors, call for domestic police enforcement rather than military action.

There are other areas that provide greater challenges for the PLA. Taiwan is the obvious example. From China's point of view, Taiwan is a domestic issue. Should the rebel island province declare independence, a strong response would be required from the Chinese government. In fact, the Chinese government has repeatedly indicated that such a move would call for military intervention. The

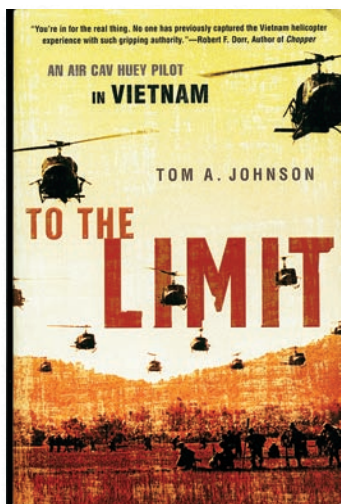
greatest concern in that regard would be the role played by the United States. The Chinese military is developing scenarios and contingency plans to frustrate any US involvement. Both the Chinese Air Force (PLAAF) and the Navy (PLAN) would play major roles in that eventuality. PLA reliance in past wars on ground forces means that both the Air Force and Navy are largely untested. Furthermore, the coordination of all three branches in mutual support in a conflict has also been largely untested. China has seen, in the Gulf War and Iraq, what the US military can do with such coordination. These are areas where the PLA has been concentrating its efforts. As tensions rise and fall in the Taiwan Strait, China feels it needs to allocate more resources to prepare for such an eventuality.

Another major concern pertains to China's growing international economic interests which include access to oil supplies. While China's dependence on oil is still small compared to the United States', the trend is clear: economic growth will require larger imports of oil. The US position in the Middle East and US Navy dominance of the waters between the Middle East and Asia are seen as potential threats to Chinese access to oil. Discussions and scenarios are being developed to determine what form the Chinese Air Force and Navy should take and what their missions should be.

The contributors to this book have spent considerable time discussing the issues mentioned above. They have written at length on these topics here and elsewhere. Anyone seeking to understand what the PLA is up to would be well-advised to read this book. ■

*Richard Desjardins is a Canadian civil servant. He holds an MA in Chinese politics and has been observing Chinese politics as well as its military for two decades.*





# TO THE LIMIT

## AN AIR CAV HUEY PILOT IN VIETNAM

**BY TOM A. JOHNSON**

NEW-YORK:  
 NEW AMERICAN LIBRARY, 2007  
 AN AUTHORIZED REPRINT OF A POTOMACK BOOKS, INC  
 COPYRIGHT 2006  
 382 PAGES ISBN 978-0-451-22218-3

Review by Capt François Dufault, CD

*To the Limit* is a first hand account of Warrant Officer Tom A. Johnson's experience as a UH-1 Iroquois—better known as “Huey”—US Army pilot in the Vietnam War. He wrote this book with humbleness and without pretension by simply recalling the facts, as he experienced them, with some humor but mostly with a poignant realism. For example, throughout his tour, after having flown many casualty evacuation (CASEVAC) missions, he noticed that when young men are dying they mostly call out for their “momma” instead of their God.

Tom Johnson joined as a volunteer in the Army. As he puts it, he opted to fly for four years instead of marching for two as most drafted soldiers ended up serving their tour in the infantry. He served his Vietnam yearlong tour in the 229<sup>th</sup> Assault Helicopter Battalion of the First Air Cavalry Division and participated in operations in the A Shau and Song Re valleys. His battalion is one of the most decorated units of the Vietnam War and the first to test the airmobile concept. They did so in the battle of the Ia Drang valley in 1965 which is described in this book as well as the movie *We Were Soldiers*. For his service in Vietnam, Tom Johnson was awarded the Distinguished

Flying Cross, the Air Medal with five Silver Leaf Clusters as well as the Bronze Star. Even though he was responsible for saving the lives of many soldiers Tom Johnson, like most of his comrades, kidded about being “nothing but glorified bus drivers.”

Timelines in war are quite different than those in peacetime. Tom Johnson graduated from flight school in May 67, arrived in Vietnam in June and was aircraft commander by August. After a few months in theatre, and within six months of earning his pilot wings, he became the unit flight safety officer. These timelines were pushed not only by the war but also by the fact that pilots were restricted to a one-year tour of duty.

The book starts with WO Johnson's first night mission as an aircraft commander. This mission is to pick-up a long range reconnaissance patrol section that urgently needs to be extracted from the An Lao Valley. Following local procedure, they get radar guidance up the initial part of the valley and wait for the radar controller's instruction to turn, in order to follow the valley's path, just before the mountains that will prevent further radar coverage thus leaving



them alone in the darkness of night with high mountains all around. For today's tactical aviator accustomed to flying with night vision goggles that kind of flying is a scary thought. Johnson presents the missions in chronological order and includes occasional flashbacks to his basic and advanced helicopter training.

Even though the technology and political context have changed substantially since the Vietnam conflict, for a line pilot flying day-to-day missions in support of the army the essence of the missions as well as life in austere field locations is still very familiar. All tactical aviators, aircrew as well as technicians, will find familiarities with their own experiences somewhere in this book.

Tom Johnson's book, *To the Limit*, will be appreciated by anyone who loved reading Robert Mason's *Chickenhawk* as well as those who have a keen interest in how the war in Vietnam was fought from an aviator's point of view.

Tom Johnson now lives in Carrolton, Georgia, with his high school sweetheart, Pat, to whom he was married before going to Vietnam. He is the president of Johnson Electric Motor Shop, JEMS Computer Systems, and JEMS Equipment Company. ■

*Capt François Dufault is working in the Directorate of Aerospace Requirements 9 – Tactical Aviation within the Air Staff in Ottawa.*



## “HERE IS HELL” CANADA'S ENGAGEMENT IN SOMALIA

**BY GRANT DAWSON**

VANCOUVER:  
UNIVERSITY OF BRITISH COLUMBIA PRESS, 2007  
230 PAGES ISBN 978-0-7748-1298-6

Review by Major Bill March

Somalia! The mere mention of the country can evoke a wide variety of visceral emotions among Canadians. For some it will be the shock surrounding the death of 16-year-old Shidane Arone at the hands of Canadian soldiers. For others it will be a sense of disbelief and angst over the revelations of problems within the Canadian Forces (CF) and the Department of National Defence (DND) exposed during the well publicized Commission of Inquiry into the

Deployment of Canadian Forces to Somalia and its subsequent report, *Dishonoured Legacy: The Lessons of the Somalia Affair*. Finally, there are those who will remember Somalia through a sense of horror at the images of the corpse of a US serviceman being dragged through the streets of Mogadishu, or with a feeling of pulse-pumping entertainment watching Hollywood's take on events through the movie *Blackhawk Down*.

Regardless of the emotional impact of this period in our history, I wager that few Canadians, unless they were among the small number intimately involved in the mission, have a clear understanding of the complexities surrounding the decision by the Canadian government to become “engaged” in this troubled African country. Grant Dawson, in his book *“Here is Hell”*, provides a window through which the reader can gain a better understanding of the political, bureaucratic and military forces that shaped the mission from start to finish.

From a Canadian perspective there were three Somalia missions. The first grew out of public and political desire to ameliorate a humanitarian crisis brought about by famine and civil war that gained international attention in the early months of 1992. Under the auspices of the United Nations (UN), Canada contributed to a humanitarian airlift commencing in August of that year. However, the increasingly chaotic environment in Somalia—especially in urban areas such as Mogadishu—made it difficult to protect UN and non-governmental organization (NGO) workers and aid shipments. Various Somali factions quickly realized the political and financial worth of the aid shipments and looting was rampant. In response the UN looked to move beyond traditional peacekeeping to offer a modicum of protection through a more robust military presence, but by late November the international body acknowledged that it had failed to achieve the desired results. The US, already somewhat impatient with the UN’s slow progress, became the lead nation in what would be called the Unified Task Force (UTF). The UTF was authorized by UN Security Council Resolution 793 (3 December 1992) with the general mandate to enforce a certain level of stability, especially in southern Somalia where the humanitarian need was the greatest. Canada approved of this second mission and contributed a battle group formed around the Canadian Airborne Regiment (CAR).

The deployment of the UTF was to be temporary in duration, with the UN taking over from coalition forces as soon as the security situation had improved. Unfortunately, this goal proved

more difficult to achieve than had originally been forecast. Canada was approached in the March/April 1993 timeframe to extend the original commitment and perhaps agree to transfer the Canadian contingent to a new UN mission at a mutually agreed upon date. Circumstances in Canada had changed drastically between December 1992 and April 1993. Canadian military and foreign affairs staffs were sceptical that lengthening the UTF mission would have any practical results. At the same time, the strain placed on military resources by the shrinking defence budget and increased commitments to ongoing UN missions, such as in the Balkans, made it difficult to recommend support for remaining in Somalia. The Minister of National Defence, Kim Campbell, sought approval from the Prime Minister (PM), Brian Mulroney, to refuse the UN overture. Although he seriously considered extending the Canadian mission, Mulroney was cognizant that domestic public and media interest had switched from Somalia to the Balkans. The death of Arone, and the growing political scandal stemming from the incident and its subsequent mismanagement by DND and the government, were also factors taken into consideration as the PM deliberated on the UN mission. In June 1993, the UN was informed that Canada would withdraw its forces as soon as its area of responsibility could be transferred to a UN contingent.

Dawson does an excellent job of explaining the political and military complexities surrounding Canada’s approach to Somalia. Although Canada’s support of multilateralism will not come as a surprise, readers should pay close attention to the pitfalls associated with an over exuberant pursuit of this approach to international affairs. This is especially true when political decisions are motivated more by public and media perception rather than national interest. Dawson argues that the self-perceived “need” to support every UN mission, spurred on by images of war and famine on the television, resulted in Canadian participation in a course of action for which the international community was woefully unprepared. Caught up in a sense of action-oriented optimism brought about by the end of the Cold War, the UN found itself

mired in a land where there was no peace to keep and, perhaps far worse, there were no coherent political authorities amongst the Somali factions to interact with. Attempting to shift gears from peacekeeping to peace enforcement only exacerbated UN confusion and eventually led to Canadian involvement in a non-UN coalition. The UTF's UN-sanctioned peace enforcement role opened up a new and untried chapter in Canadian foreign policy that was not anticipated.

Of special note is Dawson's detailed examination of the military planning process associated with the Somalia mission. This is often an area that is ignored or quickly glossed over in many works that have a more political/policy focus. The author paints a picture of a military planning process that was in the throes of change. The CF, reacting to the end of the Cold War and recent initiatives brought about by the Gulf War, was moving towards a more coherent joint planning matrix better able to deal quickly with complex missions such as Somalia. Like the UN and the Canadian government, the CF was working through the difficulties associated with preparing and implementing a mission that was less than war, but more than traditional peacekeeping. Undoubtedly, mistakes were made, but valuable insight was gained that would stand the CF in good stead during later missions.

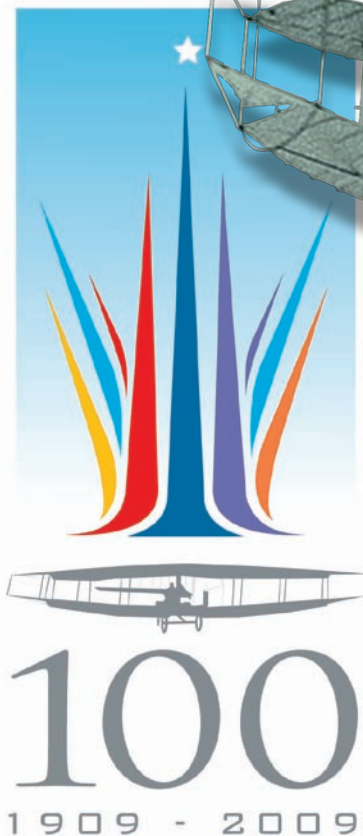
Dawson does not shy away from discussing the Arone murder, but he does not dwell on it; it happened and the ripples it created will always taint the mission. He does spend more time examining the process by which the CAR was chosen as Canada's contribution to the UTF. Despite some internal disciplinary problems, which he argues were no greater than those of other battalions, he provides clear evidence that the decision to send the CAR to Somalia was based on a clear professional assessment. The CAR was trained, available and was designated as the UN standby force. Not to send it would have made no sense. Dawson stops short of addressing the Somalia Enquiry, as it is outside the scope of this book; however, this should not be construed as a weakness, but as a strength. "Here is Hell" is about the mission, not its aftermath.

I have two minor criticisms—one of which I will blame on the publisher and the other on the author. The title "Here is Hell" was undoubtedly chosen by the publisher to be eye-catching for potential buyers scanning rows of books at the local bookstore. Unfortunately, although the narrative does convey a sense of the complexity and chaos that was Somalia in 1992, it does not leave the reader with an emotional impact worthy of such a graphic title. My second criticism deals with the way the narrative is put together. Each chapter begins with an introduction that repeats many of the main themes and information from the preceding ones. The end result is a certain amount of redundancy of information that interrupts the flow of the narrative and gives the impression that the book is a compilation of stand-alone parts that have been cobbled together.

Why read this book? In many ways Somalia was the harbinger of the type of mission that Canada would increasingly become engaged in—less about peace and more about enforcement. As such Dawson's work will be of interest to students of both foreign and defence policy. From an aerospace perspective, it offers a very good overview of the airlift portion of the mission which is often an important, but overlooked part, of many of the CF's international missions. The book also offers some insight into how the military planning process coped with large-scale political and organizational changes of benefit to planners today. Most of all, "Here is Hell" provides a concrete example of how the best efforts of all concerned can be quickly overshadowed by a single event and its follow-on effects. That is a lesson that we should always keep in mind. ■

*Major Bill March, a maritime Air Navigator working on unmanned air vehicle concepts and doctrine, has taught Canadian defence and air power history at the undergraduate level. He is currently pursuing his doctorate in War Studies at the Royal Military College.*





## THROUGH ADVERSITY AND MORE: LOOKING AHEAD TOWARDS THE CANADIAN CENTENNIAL OF FLIGHT

By Lieutenant Steven Dieter

The year 2009 marks the 100<sup>th</sup> anniversary of the first powered, heavier-than-air, controlled flight in Canada by J.A.D. McCurdy in the Silver Dart.

Very few nations in the world owe more to flight than Canada. Aviation opened up the country and remains a lifeline to many remote and northern areas. The significance of aviation today and what it has done for Canada can

be compared to what the Canadian Pacific Railway did for Canada in the years after Confederation. Today, aerospace activity makes



Flight of the Silver Dart aircraft of the Aerial Experimental Association, piloted by Douglas McCurdy  
DND/Library and Archives Canada



Aviation pioneer J.A.D. McCurdy at the controls of the AEA Silver Dart  
DND/Library and Archives Canada



up a larger component of our industrial base than any other nation.

The history of military aviation in Canada goes back to Petawawa in August 1909, when the first military flight in Canada took place involving the Silver Dart. It would be another six months before a member of the military would participate in a flight as a passenger. While official interest in military air power waned, Canadians were captivated.

As war became a reality in 1914, thousands of Canadians enlisted for military service. The history of the Air Force runs rampant with the achievements of Canadians who joined the Royal Flying Corps and the Royal Naval Air Service during the First World War, most of whom transferred from the Canadian Expeditionary Force. There were those, such as Billy Bishop, Ray Collishaw and Billy Barker, who earned their reputations in the air. However, others, such as Prime Minister Lester Pearson and National Hockey League builder Conn Smythe, would become much more renowned after the war. Canada became a bastion for training, as pilots were trained at the newly established Camp Borden.



Camp Borden 1914

Dept. of National Defence/Library and Archives Canada

Efforts to create a Canadian Air Force were started in 1918, but it would take six years before the Royal Canadian Air Force (RCAF) was officially created on 1 April 1924. However, the newly created RCAF was not only responsible for military aviation but was also responsible for civilian aviation until the mid-1930s. Matters such as photography and

forestry operations along with the control of civil aviation (including issuing civilian pilot licenses) helped to give the RCAF a *raison d'être* during the Great Depression, when the budgets of all three services were being cut back.



Signing of the British Commonwealth Air Training Plan agreement

Walter J. Turnbull / Library and Archives Canada / C-024696

When Canada entered the Second World War a proposal to train aircrew was made by Prime Minister Mackenzie King in 1939. As a result, Canada became the home of the British Commonwealth Air Training Plan which prepared pilots and aircrew from all over the world for combat. Canadian pilots took part in the Battle of Britain to defend the skies over England against German aerial attack. As more Canadians became qualified as aircrew and departed for the European theatre of operations, more squadrons were created to accommodate them. In 1943 the number of Canadian bomber squadrons allowed for the creation of Number 6 Bomber Group which was one of Bomber Command's most successful formations. The Air Force continued to play a role on the world stage after the Second World War. Pilots served with American fighter squadrons in the Korean conflict. As a part of the North Atlantic Treaty Organization, members of the Air Force team were posted to air bases in Europe to help defend the Western world. When the risk of attack was felt to be closer to home, North American Aerospace Defense Command—an alliance which continues to this day—was formed.

With the formation of Air Command in 1975, the Air Force has contributed to the defence

of Canadian values and humanitarian efforts at home and abroad. The efforts of the Air Force have contributed to operations around the globe—the First Gulf War, Bosnia, Kosovo and numerous peacekeeping operations. Civil-military cooperation is visible with many search and rescue operations, as the Air Force works with the Canadian Coast Guard and civilian agencies to save lives. The Air Force works with the Navy to protect the maritime approaches on our coasts and the Army on key tactical operations. Our CF18 fighters scrambled on 11 September 2001 as part of the effort to protect the skies against terrorism and to ensure the safe landing of countless aircraft diverted to Canadian airspace—and Canadian soil—as a result of attacks upon the United States.



A servicing technician directs the pilot of a visiting CF18 Hornet jet fighter to a temporary hangar after a routine flight over the Atlantic coast. This Hornet, from 425 Tactical Fighter Squadron at 3 Wing Bagotville, is one of six brought to 14 Wing Greenwood after the terrorist attacks of September 11, when NORAD increased air patrols in the region.

Photo by Sgt Dennis Mah, DGP/MJ5PA Combat Camera

Members of the Air Force have answered the call to serve, in peace and in war. Aircrew, ground crew and support personnel have defended the skies of the world and have striven to increase the influence and impact of aviation. They have literally gone Through Adversity to the Stars—and beyond. The Air Force has been a proud part of this tradition since nearly the beginning, and the future is looking bigger and brighter than ever.

All Canadian Forces members, their families and friends are encouraged to participate in the celebrations and activities that will occur in 2009. Whether it is humanitarian efforts, search and rescue, tactical aviation or maritime support, the roles and influences of the Air

Force are felt through all elements of the Canadian Forces as well as in civilian matters. The Department of National Defence, as represented by the Air Force, is one of 17 member organizations for the Canadian Centennial of Flight Project.

At the national level, the Canadian Centennial of Flight Project was envisioned as a way to provide support to Canadians who want to make the 100th Anniversary of the first flight in Canada an opportunity to celebrate. Celebrations will include not only the historical event of 23 February 1909, when the Silver Dart took flight, but also Canadian accomplishments (both home and abroad) in civilian and military aviation in the decades since then.

Canadian Centennial of Flight celebrations will encompass the history of aviation and space activities, the education of youth, the technological and commercial aspects of aerospace development and careers and, most of all, will connect with Canadians. Many of the activities will highlight achievements of the past 100 years and will increase Canadians' understanding of the importance of aviation and space endeavours to their country.



The Golden Hawks aerobatic team was formed in 1959 to celebrate the 50<sup>th</sup> anniversary of powered flight in Canada as well as the 35<sup>th</sup> anniversary of the RCAF. Initially established for one year, the Golden Hawks gave 317 shows and were finally disbanded in 1963 after their last performance in Montreal, Quebec.

CF Photo

For example, the Royal Canadian Mint will strike a commemorative coin to help mark the Centennial. Canada Post will release a postage stamp in February to coincide with the celebrations that will take place in Baddeck,

Nova Scotia. Communities and businesses across the country—large and small, military and civilian—will let Canadians know all about the Centennial of Flight through special events. In 2009, the Snowbirds will be accompanied by “Hawk One”—a restored F86 Sabre painted in the colours of the RCAF Golden Hawks air demonstration team. This is just a short list of activities planned for 2009. Plan an event and share the information with Canadians through the Centennial of Flight website.

While the first flight took place on that cold February 23<sup>rd</sup> in 1909 at Baddeck, Nova Scotia, the Centennial of Flight Project will be coordinating a year-long commemoration with many exciting and educational activities planned from coast to coast to coast.

Visit our website at [www.airforce.canadiancentennialofflight.ca](http://www.airforce.canadiancentennialofflight.ca) ■

*Lieutenant Steven Dieter is a Public Affairs Officer in training. He is currently gaining on the job experience with the Directorate of Air Public Affairs at National Defence Headquarters, where he has been tasked to the Centennial of Flight Project. He is an Associate Air Force Historian with the Office of Air Force Heritage and History and a former historian of the Billy Bishop Museum in his hometown of Owen Sound, Ontario.*

## Canadian Centennial of Flight Project

### Member Organizations:

- Aerospace Industries Association of Canada
- Air Cadet League of Canada
- Air Force Association of Canada
- Air Transport Association of Canada
- Canada Aviation Museum
- Canada's Aviation Hall of Fame
- Canadian Aeronautical Preservation Association
- Canadian Aeronautics and Space Institute
- Canadian Airports Council
- Canadian Aviation Historical Society
- Canadian Aviation Maintenance Council
- Canadian Business Aviation Association
- Canadian Owners and Pilots Association
- Department of National Defence
- NAV CANADA
- Silver Dart Centennial Association
- Vintage Wings of Canada





# PUSHING THE ENVELOPE

## A Fine Mess: How Our Tactical Helicopter Force Came To Be What It Is

*Col Randall Wakelam*

It's hard to disagree with the conclusions which Thierry Gongora and Slawomir Wesolkowski reach in their article<sup>1</sup> on the Air Force's tactical helicopter force: balanced it is not. The nagging question which, however, remains unasked and unanswered is how did we come to be in this position? The next few paragraphs are intended to shed some light on aviation doctrine and procurement decisions during the 1970s, 80s and 90s as I believe that this historical context is germane to understanding where we are today. Much of what follows is based on personal recollection and anecdotal history.

During the 1960s we had three categories of helicopters (here I will use the categories defined in the original article). Reconnaissance helicopters (CH112 Hiller Nomads) were operated by armoured regiments in what were called the "bubble troops." The Royal Canadian Army Service Corps activated 1 Transport Helicopter Platoon and equipped it with light transport helicopters—the Vertol CH113 Voyageur. Finally, we purchased a squadron's worth of CUH-1H (subsequent CH118) Iroquois utility helicopters and formed 403 Squadron as a precursor to bigger things to come. So we had three of four of the principal categories of tactical helicopters. As the 1970s advanced we replaced all three fleets with more up to date hardware in the

form of the CH136 Kiowa reconnaissance helicopter, the CH147 Chinook medium transport helicopter and the CH135 Twin Huey utility helicopter.

Tactical aviation doctrine had been formulated in the late 1960s and was promulgated in Canadian Forces Publication 311(5) in 1971. CFP 311(5) *The Tactical Helicopter Squadron in Battle* was a Force Mobile Command document in the days when there was no army or air force as such and the tactical air and aviation assets with 10 Tactical Air Group belonged to the land element. Other titles in the 311 series spoke to the infantry battalion, the armoured and artillery regiments and the like. Similar to the US Army, which was the model that North Atlantic Treaty Organization nations used as a benchmark, the 311(5) described four categories of helicopters. These categories were: observation, utility, transport and attack. Members of 10 Tactical Air Group, while recognizing that Canada was unlikely to acquire attack assets due to cost and politics, understood well the need for attack helicopters on the Cold War battlefield. Wherever possible Canadian field exercises would include US Army attack units and Canada established an attack helicopter exchange at the end of the 1970s. Attack assets were also included in wargames and operational research modelling. As the Army designed its ultimate staff college Cold War organization, Corps 86, it included not only a complete attack helicopter wing but a medium transport helicopter wing and composite wings within each army division. There was no question as to the importance of a balanced aviation force.

It was also in the latter half of the 1980s that it was recognized that all three fleets would soon be in need of midlife refits. Projects were started, but as with all such undertakings progress was slow. Compounding the challenge was the fact that while the aircraft were now operated by the Air Force the money for these projects would come in large part from the Army since the capability was similarly in large part a land force one. At the same time there was also a push in the Air Force to rationalize the number of fleets being operated.

The Joint Helicopter Acquisition Project concept was to acquire one aircraft, the EH101, to replace SAR Vertols, navy Sea Kings and strangely the Chinooks. The concept was dropped, as far as the Chinooks were concerned, when it was determined that the best load that the EH101 could manage was either the front or the rear unit of the BV 206 over snow vehicle and that the distance that these units could be moved was only about 60 km on the fuel available. This meant that it would be necessary to consider extending the Chinook. There were at that time seven aircraft in the fleet and they had proven of limited reliability. With three aircraft at Namao with 447 Squadron and four on the establishment of 450 Squadron in Ottawa there were many days when each squadron had only one aircraft available. The units were not located with army units or formations and as a result they were often deemed of limited utility. Thus when the army was asked to provide some \$500M to refurbish the aircraft the answer was No. The aircraft, as is currently well known, were ultimately sold to the Dutch.

By comparison the CH135 extension programme seemed cheap and low risk. The US Marines were in the process of extending their UH-1N fleet and it seemed plausible to add the Canadian aircraft to that process. Similarly the Kiowa project looked to such alternatives as the US Army OH 58D programme to provide a renewed aircraft with capabilities for years to come—ironically including enhanced observation and armed capabilities.

Regardless, neither of these projects had much chance of moving ahead given that the end of Cold War peace dividend was taking over. As the defence budget stalled it appeared that there would be no alternative but to stretch the service life of these two fleets, much like the current day Sea King. Thus when the government announced in the fall of 1991 that the CF would be buying 100 Bell CH146 Griffons to replace both remaining fleets there was a scramble to see how aviation doctrine could adapt to this circumstance. Working groups were struck to look at crew configurations to protect at least some of the reconnaissance capability of the Kiowa; it was intended that each squadron retain about half a dozen combat arms observers who had crewed the CH136. Later in the decade, work was done to develop an enhanced observation suite—Electro-optical, Reconnaissance, Surveillance and Target Acquisition—to allow the aircraft to conduct stand off observation.

While this work was going on (and still is) to try to stretch one fleet across two categories, the country remained (as Gongora and Wesolkowski point out) without a transport, attack or reconnaissance capability. Indeed, one might conclude that while we have recognized from the earliest days of aviation the need for a balanced and complete suite of aircraft categories and capabilities we have indeed gotten ourselves into a fine mess. ■

*Col Randall Wakelam served in 408, 403 and 430 Squadrons between 1977 and 1986. He was Directorate of Land Aviation 3, responsible for aviation procurement from 1988 to 1989. He commanded 408 Squadron from 1991 to 1993 and is currently Director of Research and Symposia at the Canadian Forces College.*

### Notes

1. Thierry Gongora and Slawomir Wesolkowski, "What Does a Balance Tactical Helicopter Force Look Like: An International Comparison," *The Canadian Air Force Journal* 1, no.2 (Summer 2008): 13-19. Available on-line at [http://www.airforce.forces.gc.ca/CFAWC/eLibrary/Journal/Vol1-2008/Iss2-Summer\\_e.asp](http://www.airforce.forces.gc.ca/CFAWC/eLibrary/Journal/Vol1-2008/Iss2-Summer_e.asp) (accessed August 15, 2008).

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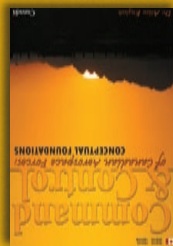
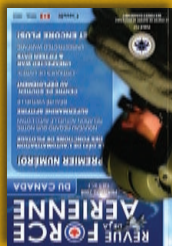
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