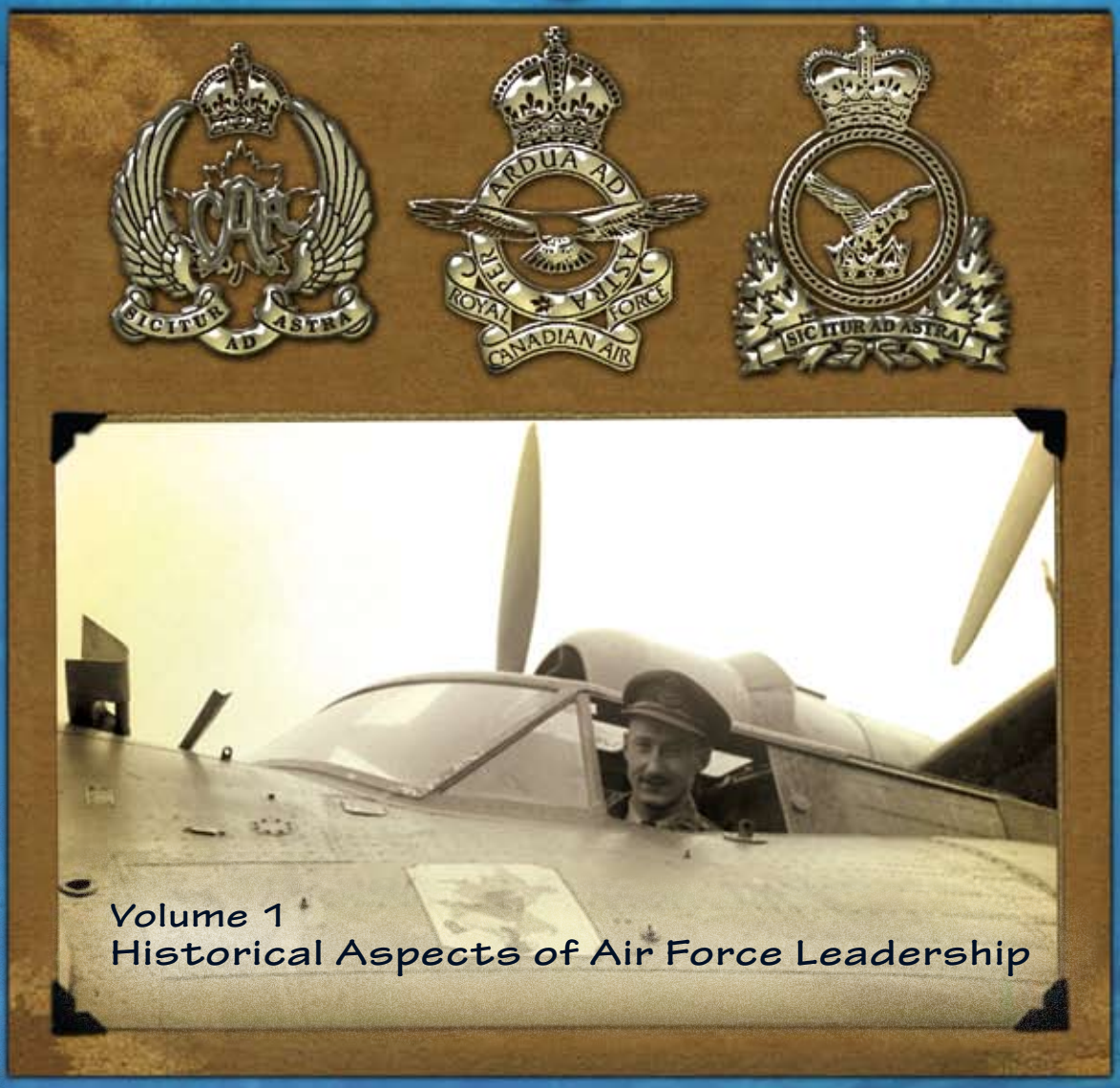
Sic Itur Ad Astra
Canadian Aerospace Power Studies



Volume 1
Historical Aspects of Air Force Leadership

National Defence Défense nationale

Canada

Sic Itur Ad Astra:
Canadian Aerospace Power Studies

Volume 1
Historical Aspects of Air Force Leadership

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Cover photo: Squadron Leader Len Birchall aboard the Catalina Flying Boat before being shot down and captured by the Japanese in 1942. Credit: DND

Table of Contents

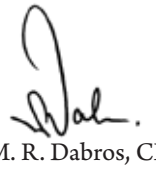
Preface

Two of the core responsibilities of the Canadian Forces Aerospace Warfare Centre are to undertake and promote the study of aerospace power from a Canadian perspective. These are important tasks because aerospace power, define it as you will, is a key element of national power both at home and abroad. Therefore, as professionals it is important for us not only to study our chosen occupation, but to make the product of that study available to a broader audience. I cannot emphasize the latter point enough; for if there is one thing that history has (or should have) taught practitioners of aerospace power, it is that it does not exist in a vacuum. As demonstrated by the ongoing conflict in Afghanistan, aerospace power is but one tool in a very deep and complex tool box that a government has at its disposal. An understanding of its strengths and weaknesses, as well as its relationship with other elements of national power, is essential to make sure that aerospace capabilities are employed in an effective and complementary manner. A key way of ensuring this is by learning from our past aerospace power experiences.

With this in mind, it is my pleasure to introduce the premier issue of *Sic Itur Ad Astra: Canadian Aerospace Power Studies*. History is one of the basic building blocks of an institutional learning process, and as we grapple with present complexities and an uncertain future, the Air Force as an institution needs to continue to adapt. The *Sic Itur Ad Astra* series is designed to explore, and "mine," the rich history and heritage of Canadian military aviation in all its forms and guises. Indeed, and as an occasional desired outcome, historical "nuggets" will be used to help shape and illustrate our aerospace doctrine and concepts.

It is appropriate that our first volume examines aspects of Air Force leadership, a focus that goes to the heart of any military service: its people and how to lead them. Although future issues may address more technical or organizational subjects, we must always remain cognizant of the human dimension. Without a doubt, some of the more demanding aspects of aerospace power throughout our history have been the challenges associated with understanding, motivating and leading Air Force personnel in peace and war.

I hope that you will find the material contained herein interesting, educational and, above all, thought provoking.



M. R. Dabros, CD
Colonel
Commanding Officer

Introduction

Is there such a thing as "Air Force" leadership? When pondering the question, it is tempting to respond in terms of a simple yes or no. Those who feel that the air environment, and combat therein, requires a special approach would be more inclined to answer yes, while those who view the air as but another part of the all-encompassing battlespace might be more willing to respond with a categorical no. Or is there a middle ground? Are there leadership elements that are unique to the Air Force and are there other qualities that are shared with the other services? Perhaps it is a moot question now that the favoured approach to military endeavours is either joint (i.e., involving the Army, Navy and Air Force) or joint, interagency, multinational and public (JIMP) focused.

The Canadian Air Force has no leadership doctrine. Indeed, the closest thing that can be described as a definitive statement on air force leadership is found in *Strategic Vectors: The Air Force Transformation Vision* published in 2004 by the Director General Air Force Development. One of the main thrusts, or vectors, of Air Force development in the 21st century advocates "transformation-enabling" leadership as a necessary goal. To achieve this type of leadership, air force leaders would:

> … need to be provided with a range of experience and professional development over their career with which to acquire the breadth and depth of aerospace knowledge required to effectively develop and employ aerospace power across a spectrum of activity and conflict.[1]

Individuals who have reached this level of aerospace expertise will become the "thinkers, leaders and visionaries" of the future.[2] However, a detailed definition of exactly what transformation-enabling leadership entails is sadly lacking.

Indeed, if a member of the Canadian Air Force wishes to determine what constitutes leadership, then he or she must turn to the Canadian Forces (CF) joint publications. *Duty with Honour: The Profession of Arms in Canada* is a good place to start because it provides an examination of the core principles of what the military is and does from a Canadian perspective. It states that the three "Environmental Chiefs of Staff (ECS) … are responsible for generating and maintaining operationally ready forces and conducting routine operations."[3] Unfortunately, nowhere does it describe the ECS as leading their respective services except in generalities. Specific service requirements, referred to as "core knowledge," are regulated to the tactical level with the understanding that "the core body of knowledge at the operational and strategic levels is essentially the same."[4] If this is true, then future air force leaders may not have to worry about the intricacies of leading an air campaign involving anything more than a squadron.

Air Force leaders will find much to think about and agree with in *Leadership in the Canadian Forces: Conceptual Foundations*. Therein effective leadership is defined as "directing, motivating, and enabling others to accomplish the mission professionally and ethically, while developing or improving capabilities that contribute to mission success."[5] As well, few would argue with the differences inherent in leading people on one hand, and the myriad of challenges that come with leading an institution. However, the discussion contained in chapters 6 and 7, respectively, tend to treat "people" and "institution" as monolithic constructs that form one coherent CF.[6] If true, then Army, Navy and Air Force culture would have virtually no impact on leadership, as the individual servicemen and women who make up these cultures would use / respond to the same type of leadership. As well, there seems to be a lack of recognition that the Army, Navy and Air Force are institutions in their own right and may have subtly different institutional leadership requirements.

Canadian Forces leadership doctrine does make allowances for the cultural difference inherent in the respective services. In *Leadership in the Canadian Forces: Leading People,* cultural differences are acknowledged in two ways. First, and perhaps foremost, it acknowledges that customs and traditions that contribute to service culture "form characteristics that bond members [and] produce special social structures that contribute to a sense of unity and military identity."[7] Secondly, and perhaps more importantly with respect to the Air Force, this doctrine manual equates environmental culture with leadership style. The opening sentence of the section entitled "Leadership Styles" cautions that "leaders must be aware that leadership styles tend to be different across the Navy, Army and Air Force, naturally reflecting the different roles each service plays in the battle-space [*sic*]."[8] However, upon further reading in this section, service culture and different leadership styles are quickly relegated once again to the "tactical"

level. Any differences, real or imagined, will be subsumed by a "true joint doctrine and a pervasive CF culture [which] tends to minimize these differences … [and is] particularly true as leaders rise in rank."[9]

Somehow this seems at odds with the espoused concept of "distributive leadership," which states categorically that "no one person can master and control everything in a large and complex organization such as the CF, nor is it reasonable to expect anyone to do so."[10] Does this not seem to imply that complex, culturally different organizations such as the Air Force, require leaders who are selected, trained and educated in the nuances of their service? Who better to ensure that the Air Force, with all its people, resources and capabilities, makes an optimum contribution to the battlespace —at all levels—while at the same time continuing to develop as an institution.[11]

A thorough reading of CF leadership doctrine may raise more questions with respect to service-oriented leadership than provide answers. This being said, the failure to address aerospace leadership may not lie within the joint realm, but within the Air Force itself. Until recently, there has not been a lot of serious examination of what it means to be a leader within the Air Force. Works such as Allan English's *The Cream of the Crop: Canadian Aircrew, 1939–1945* broke new ground with its look at selecting aircrew for combat. Throughout the book English emphasizes the importance of good leadership as a precursor to effective flight operations.[12] Although this observation is not surprising, the approach to what constituted an effective air force leader was. As English notes, "the first task of a new leader who was new to a squadron was to establish his expertise in flying."[13] It was only after leaders had established their technical qualifications would they be "permitted" to lead a squadron or unit. Once past the technical threshold, other leadership qualities, such as fairness and willingness to share the danger, took on greater value to those being led.

It could be argued that this is a unique air force cultural leadership dynamic. Certainly, English continues to expound on what he has labelled "technical and heroic leadership" as cornerstones of Air Force leadership. In *The Operational Art: Canadian Perspectives, Leadership and Command,* and *Canadian Air Force Leadership and Command: The Human Dimension of Expeditionary Air Force Operations,* he reinforces the pervasiveness within the Air Force for aircrew, and to a certain extent ground crew (albeit more technical than heroic), to favour these two leadership styles.[14] Interestingly, although the former publication does contain submissions by senior Air Force officers, only English's chapter discusses air force leadership as a separate entity.

There are other elements of Air Force leadership that have yet to be dealt with in any systematic manner. Although the CF leadership doctrine highlights the need for institutional leadership, little has been written on this subject from a "light blue" perspective. The leadership role of non-commissioned members (NCMs) within the Air Force also needs to be researched and commented upon. Authors such as English have begun to delve into this subject, but the bulk of the material relates to NCMs within land combat units.[15] Finally, there is a requirement to address certain cultural drivers that exist within the Air Force. For example, a deployed air wing with flying squadrons, maintenance personnel, airfield engineering flights, military police, and so forth, may require a more multifaceted approach to leadership as opposed to those of the other services. Especially with today's multidimensional battlespace, Air Force leaders at all rank levels must be prepared to lead in the air, on the ground (sea) or in Ottawa. Indeed, it can be stated that "a key aspect of the art of air warfare, leadership, has not been carefully studied in a Canadian context" and "this is a serious obstacle to mastering the profession of arms in the Canadian Air Force."[16]

Part of the mandate of the Canadian Forces Aerospace Warfare Centre is to examine aerospace issues of interest to the Air Force, and leadership is front and centre. Therefore, it was decided the inaugural edition of *Sic Itur Ad Astra: Canadian Aerospace Power Studies* would examine some of the historical aspects of Canadian air leadership. Volume 1, *Historical Aspects of Air Force Leadership*, contains the papers presented at the Air Force Historical Workshop held in Ottawa, 24-25 September 2008.[17]

The bulk of the papers in Volume 1 deal with what could be described as institutional leadership. Richard Goette and Matthew Trudgen examine the issues associated with guiding the Royal Canadian Air Force (RCAF) through the turbulent post-war period. Set against the backdrop of North American air defence and bi-national political and military requirements, these papers point to some interesting challenges that the Air Force was dealing with during its so-called "Golden Years." At this period in Air Force history there was no question that the RCAF was a separate institution. From a

different perspective, that of an institution facing internal problems, Rachel Lea Heide's examination of disobedience in Canada's Air Forces, 1919-1946, also lends itself to an appreciation of the subtly different approach Air Force leaders took to deal with these potentially volatile incidents. Finally, William P. Sparling's overview of Canadian efforts in space ends with a call for more proactive aerospace leadership to ensure that as a nation we do not fall behind.

Institutional leadership is also the focus of papers by Suzanne Edwards, Hugh Halliday, Raymond Stouffer and Edward Peter Soye. However, all of these authors chose to concentrate on the role of specific individuals within the Air Force. Halliday's survey of a select group of pre-World War II squadron leaders and their accomplishments—or lack thereof—during the war, is fascinating. That some of these individuals rose to great heights, while others never advanced much beyond their initial rank, begs additional study to understand what were the determining factors, be they training, education, experience, opportunity or just plain luck. Meanwhile, Soye's examination of the role of Wing Commander Ralph V. Manning in preserving Air Force history and heritage speaks to the need to strengthen service culture as an important element of institutional viability.

Both Edwards and Stouffer looked at the institutional leadership of a specific senior Air Force officer. Air Chief Marshal Frank Miller had the unique distinction of being not only a senior air officer, but the Deputy Minister of the Department of National Defence and the first Chief of the Defence Staff of a unified Canadian Forces. Stouffer's excellent account only scratches the surface of the Miller story and the achievements of this most accomplished leader. A full-fledged biographical study is required. The same could be said with respect to Edwards' paper on her father, Air Marshal Harold (Gus) Edwards. Distilled from her book on the same subject, Edwards' look at her father's work on helping to create what would become the fourth largest Allied air force, and his struggles to ensure the "Canadianization" of overseas RCAF squadrons, is well worth a read. Both of these papers highlight the need for, and lack of, a comprehensive look at senior Canadian Air Force leaders regardless of the time period. The dedication and courage of these individuals is worthy of study.

More in line with English's work on technical and heroic leadership is Cable's paper on Squadron Leader L. J. Birchall. Birchall's courage and flying ability were put to the test when he chose to risk all to warn of an impending Japanese invasion of Ceylon in early 1942. Shot down, he and the surviving members of his crew spent the rest of the war as prisoners, enduring inhumane treatment and torture. The selflessness, fortitude and leadership that Birchall demonstrated during his captivity are legendary. It also points to the need to prepare Air Force officers to be leaders both in the air and on the ground, regardless of the circumstances.

The concluding paper by William Lewis addresses CF leadership doctrine and how it relates to the Air Force. It concludes by advocating additional study of leadership from an air perspective—a recommendation that it is hoped will be acted upon. Hopefully these papers will be seen as contributing to the proposed studies by providing additional insight into the historical aspects of Air Force leadership. Enjoy the read.

Notes

1. Canada, Department of National Defence (hereafter DND), *Strategic Vectors: The Air Force Transformation Vision* (Ottawa: Director General Air Force Development, 2004), 49.
2. Ibid.
3. DND, *Duty with Honour: The Profession of Arms in Canada* (Kingston: Canadian Forces Leadership Institute, 2003), 48.
4. Ibid., 51.
5. DND, *Leadership in the Canadian Forces: Conceptual Foundations* (Kingston: Canadian Forces Leadership Institute, 2005), 30.
6. Ibid., Chapter 6, "Leading People: An Overview," 75–96 and Chapter 7, "Leading the Institution: An Overview," 97–118.
7. DND, *Leadership in the Canadian Forces: Leading People* (Kingston: Canadian Forces Leadership Institute, 2007), 87.
8. Ibid., 86.
9. Ibid.
10. Ibid., 8.

11. The Air Force, like the Army and Navy, is acknowledged as a separate institution within the CF, albeit only for the organizing and generating of operationally ready forces. DND, *Leadership in the Canadian Forces: Leading the Institution* (Kingston: Canadian Forces Leadership Institute, 2007), 54.

12. Allan English, *The Cream of the Crop: Canadian Aircrew 1939–1945* (Montreal: McGill-Queen's University Press, 1996), 65, 90, 97.

13. Ibid., 97.

14. See Allan English, "The Masks of Command: Leadership Differences in the Canadian Army, Navy and Air Force" in Allan English, ed., *The Operational Art: Canadian Perspectives, Leadership and Command* (Winnipeg: Canadian Defence Academy Press, 2006), 1-30; and "Air Force Leadership: An Overview and Canadian Perspectives" in Allan English and Colonel John Westrop (Retired), *Canadian Air Force Leadership and Command: The Human Dimension of Expeditionary Air Force Operations* (Trenton, Ontario: Canadian Forces Aerospace Warfare Centre, 2007), 89-109. Although much of the material contained in these two publications is similar, both should be read for the interesting perspectives they bring to the subject.

15. See Allan English, "The Senior NCO Corps and Professionalism: Where do We Stand?"; a paper written for the CF Leadership Institute, 8 February 2005. In this paper English provides a fairly balanced overview, but he is hampered by the fact that most of his research material is army-oriented.

16. English, *Canadian Air Force Leadership and Command*, 89.

17. The Workshop is the successor of the Air Force Historical Conferences held by the Office of Air Force Heritage and History, 1 Canadian Air Division Headquarters, Winnipeg, Manitoba, at various venues since 1994. The 2008 Workshop was the 14th event that examined aspects of Canadian Air Force history.

Chapter 1

The Leadership of Air Marshal Harold (Gus) Edwards

Suzanne K. Edwards

In the summer of 1942, in the midst of the Second World War, only two Permanent Force officers in the Royal Canadian Air Force (RCAF) had attained the rank of air marshal: Lloyd S. Breadner, as Chief of the Air Staff (CAS), and my father, Harold (Gus) Edwards, as Air Officer Commanding-in-Chief of the RCAF Overseas. Both men shared similar military backgrounds; both were junior officers in the First World War, fighting in France with the Royal Naval Air Service (RNAS), and both went on to serve between the wars in the fledgling RCAF in Canada. But there the similarity ends, for how each man developed as a leader differed greatly. It is for someone else to examine Breadner's life, but based on the five years of research I conducted prior to writing the Edwards story, I will tell you what I discovered about my father. First, however, for those of you unfamiliar with his life, here is a brief summary of his career:

> In September 1944, Harold 'Gus' Edwards, at the age of 51 and at the peak of his career, retired from the Royal Canadian Air Force with the rank of Air Marshal. The punishment he had inflicted on his body in the grinding climb to the top had finally caught up with him, and that body could no longer respond to the demands he placed upon it. But what a journey it had been: from a young boy in the coal mines of Cape Breton, through war, revolution, peace, and yet another war, to the highest rank in the Service. He had been an integral part of its extraordinary growth from its inception in 1924 with a total strength of 375, to the nearly quarter of a million men and women who enlisted during the Second World War....
>
> [In 1940 and '41] it was he who directed the effort to overcome the enormous number of personnel problems arising from its own phenomenal growth and its participation in the British Commonwealth Air Training Plan [BCATP]. Perhaps his reputation as a controversial figure in the RCAF had its origin during this early part of the war, for it was in the spring of 1941 that he initiated the process to change the racist enlistment policy which excluded non-whites and required applicants to be of "pure European descent." If, indeed, that was the origin, then the article he wrote in retirement in 1946 advocating the unification of the Armed Services—twenty-two years before the actual event—could only have added fuel to the fire which had raged during the war over his passionate defence and implementation of the Government's policy of 'Canadianization'.
>
> As Air Officer Commanding-in-Chief, RCAF Overseas in London in 1942-43, he battled long and hard with the British Air Ministry and the RAF [Royal Air Force] ... to keep Canadian air crews (and later ground personnel as well) together in their own squadrons. A sailor in the Navy served with other Canadians in his ship; a soldier in the Army served with other Canadians in his regiment, but not so in the Air Force. Nearly sixty percent of Canadian airmen were scattered throughout 700-odd RAF units.... It was the championing of this Canadianization policy, in which he believed so profoundly, that would be the final blow to his health, leaving him partially disabled in retirement, and result in his death [at the age of 59] seven years after the end of the war.[1]

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As I looked at Gus's life a half-century after his death, I came to realize that the sense of purpose, courage and determination so essential in a leader, were qualities he had possessed even as a teenager. For at the age of only 14, he was not prepared to accept the status quo blindly, which would have relegated him to a miner's life underground, but rather his goal was to lift himself from the poverty and bondage of that position, to something better.

Gus was born in England in 1892, but unemployment caused his family to immigrate to Canada in 1903. His road to command began in 1907, when he left school at the age of 14 to become a

trapper boy in a coal mine. Just four years later at only 18, he was the chief electrician of the British Empire Steel Corporation's Glace Bay mines. How he rose from a menial trapper boy to chief electrician in such a short time was the result of a five-hour-a-night regime of study: two hours before going to bed, then up at 3:00 AM for three more hours before reporting for work in the mine. With dogged determination he stuck to this schedule for seven long years, never faltering in his search for knowledge and to educate himself to the equivalent of a university degree.

In late 1915, he was accepted into the Royal Canadian Navy as an able seaman, but his knowledge of machines and electricity quickly led to a commission in the Royal Naval Air Service. In August 1916, "with only fifty-three minutes with an instructor and less than six hours overall in the air—including the time it took him to fly his plane to France—he went to war, joining millions of others to fight the war that was to end all wars."[2] For the next nine months as a bomber or fighter pilot with 3 (Naval) Wing, Gus participated in a number of raids. On the return from the ill-fated reprisal raid on Freiburg in April 1917, he was shot down and taken prisoner. His commanding officer, reporting on the raid, saw in him an important quality for a leader—concern for his flight—when he wrote: "'It is only through the self sacrifice of the three missing Fighter Pilots and their Gunlayers that all our bombing machines returned safely.' And for Gus he had a special word of commendation: ' … always a conspicuous fighter pilot who has always realized the great importance of protecting his flight.'"[3] And for the rest of his life Gus continued to protect his flight, whatever its size or make-up.

Following his capture, Gus made several attempts at escape before he and two others succeeded in breaking out, only to be recaptured after 10 days on the lam. Back in prison, he continued to badger his captors, and as a consequence spent much of his time in solitary confinement. But he ceased trying to escape and used the time to study, improve his French, and teach himself German.

Three months after being released from prison, and now a captain in the RAF, he joined 47 Squadron and spent the next year in South Russia, fighting in support of General Denikin's White forces against the Bolsheviks. Released from the RAF in July 1920, he returned to Canada where he joined the Canadian Air Force in September, with the rank of flight lieutenant and the number C30.

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During the 1920s, he served in Ottawa as an administrative officer, met and married Beatrice Coffey (undoubtedly the wisest decision he ever made), participated in the aerial mapping of Manitoba, and attended courses at both the Royal Military College of Canada at Kingston, Ontario and the Royal Naval College at Greenwich, England.

***

With the training and experience he had accumulated over the years, Gus was now well prepared to take on increased responsibilities and "In September 1934 [he] was posted to Halifax to oversee the development of RCAF Station Dartmouth and assume command of No. 5 (Flying Boat) Squadron…."[4] The vehicle for the expansion of the station was one of the Unemployment Relief Projects initiated by the government during the Depression. After five years of construction, the original seaplane base was transformed into a fully functional air station with runways, hangars and other buildings, and would play a vital role in the Battle of the Atlantic during the forthcoming war.

Commanding the squadron as well as overseeing the expansion of the station required every bit of Gus's well known boundless energy and enthusiasm, and years later he remembered it as the happiest of all his postings. But the stress and added workload took a predictable toll on his health. In 1938, auricular fibrilation, a debilitating heart condition, appeared for the first time. The invention of the pacemaker was far in the future and without it doctors could do little to alleviate the symptoms of malaise and exhaustion. In fact, he would be plagued with recurring attacks throughout the balance of his career, and how, in later years, he would function so effectively, in such responsible and stressful positions, remains a mystery to me.

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But function effectively he did and, early in 1938, he returned once again to headquarters in Ottawa, this time as Senior Staff Officer, Air Personnel and Records.

> In 1938 the total strength of the RCAF was 2,510.... By the time the war ended six catastrophic years later, the RCAF had become the fourth largest allied air force and *a quarter of a million* men and women had served in its ranks....
>
> The rapid increase in strength brought a corresponding rapid rise in rank for many of those Permanent Force officers who had been in the Service since its inception. In Gus's case, where it had taken ten long years … to receive one promotion …, he received four in thirty-eight months: on 1 April 1939 to group captain; on 1 February 1940 to air commodore; on 5 August 1941 to air vice marshal and on 20 June 1942 to air marshal.[5]

Truly a meteoric rise, but accompanied by a crushing workload. It began reasonably enough in May 1939 when, as the recognized expert in Drill and Ceremonial, Gus was placed in charge of air force arrangements for the Canadian tour of the King and Queen.

On the day war was declared, his desire to be in the thick of the fighting was evident from the memo he sent:

> *In the event it is decided to send an expeditionary force overseas, may I please place on record that I am ready and available.*[6]

It would be two arduous years before he was sent overseas, and during that time his duties increased at an alarming rate. With the unimaginative code name "Mr. P. Jones," he played a part in the somewhat cloak and dagger effort of the Clayton Knight Committee to recruit Americans into the RCAF.

Two years later, when the United States entered the war, the Americans were grateful to Gus for facilitating their citizens' speedy release from the RCAF so they might join their own service. And later, in 1943, he was applauded by British and American officers following a talk he gave in the War Room of Eighth Air Force HQ on the subject of:

> … cooperation between the RAF and the USAAF [United States Army Air Force], which, due to differing views held by members of both services, was sometimes difficult to achieve. A good working relationship between the two was essential to the conduct of the war, and Gus, British born but North American in outlook, understood both cultures and made every effort to bridge the gap that prevented their understanding one another.[7]

But back to Ottawa in 1940. As the BCATP expanded:

A memo recommending his promotion to Air Commodore … lists these responsibilities:

> An extremely efficient staff officer. He is head of the personnel staff, a member of the Air Council, responsible for Manning of the Air Force, discipline, Pay, medical, chaplain services, appointments, promotions, retirements, postings, supervision of the Reserve, compilation of personnel staff estimates and control of supervision of Divisional Appropriations.[8]

For two years he maintained a frantic pace to keep up with the workload and then in November 1941, at the age of 48, he received the appointment he longed for: overseas duty.

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> ... with his wide range of experience in administration, his concern for the welfare of both officers and other ranks, and certainly his forceful personality, [Gus] was the best choice to command the RCAF overseas and to see that the terms of the BCATP were carried out. Before leaving for London, he and his deputy, A/C [Air Commodore] W.A. Curtis were told by the Minister of National Defence for Air, the Hon. [Honourable] C.G. Power, in no uncertain terms to "put the RCAF on the map" and "to get as many squadrons as possible complete with Canadian aircrew and Canadian officers."[9]
>
> Under Article XV of the original British Commonwealth Air Training Plan, … twenty-five overseas squadrons were to be formed with RCAF aircrews.… in June 1942 their number was

> increased to thirty-five, with a further provision to gradually replace RAF ground personnel in these squadrons with RCAF personnel. The term "Canadianization" came into being to describe the government's administrative policy to create these RCAF squadrons, post Canadians to them, and ... see to it that as far as possible they serve under a Canadian command structure…. It also embraced the notion that Canadian rules and regulations regarding promotion, for example, would be enforced no matter where individuals were serving.[10]

> It was on 5 September [1942] that the debate on Canadianization became an even more public one in Canada. On that day, Gus had held a press conference in London, following which he spoke "off the record." During these remarks he most unwisely criticized the editorial policy of *The Globe and Mail* and the Montreal *Gazette,* saying, "… some people are talking a lot of bloody nonsense about splitting the Empire. If Canadians who see it from that point of view want to be mugs all their lives, that's their business. I can see no reason against Canadianization."[11]

Unfortunately, time permits only a very brief synopsis of what happened next in what came to be known in our family as "The Battle of the Bloody Nonsense." His outspoken remarks caused a firestorm in Canada, and despite overwhelming public support, he was ordered to issue an apology. He did not, however, claim he had been misquoted, nor did he blame the reporter, but rather took his lumps and soldiered on.

Why was Gus such a passionate defender of Canadianization, so passionate in fact it would eventually cost him his health and his appointment? There were three main reasons: first, it was his duty to obey the Minister's orders; second, he firmly believed it was in the best interest of his troops; and, lastly, through it Canada's contribution to the air war would receive the recognition it deserved. There is no doubt some senior RAF officers were indifferent to the plan, while others were actively opposed to it, with A/M [Air Marshal] Arthur (Bomber) Harris being particularly antagonistic toward him, even going so far as to say: "I will get that so and so Edwards out of this country if it is the last thing I do."[12]

After months of effort, and exasperated with British excuses and foot-dragging, while at the same time being constantly upbraided by Ottawa for lack of progress, he deliberately precipitated a showdown by writing a strong letter to the Air Ministry. As he told Ottawa:

> "this matter had to come to a head sooner or later. It is either that my interpretation of what we want and what we are entitled to is wrong or else the Air Ministry is wrong. The only way to find out is to come out into the open. An understanding must be reached if I and my successors are to live a life that more nearly approaches one that is fit to live."[13]

Now the fat was in the fire. In Ottawa, Power was miffed he had not approved the letter in advance and Breadner suggested he come home to discuss the situation. As a true leader should, Gus took full responsibility for his actions, and was prepared to accept the consequences, whatever they might be, when he replied:

> Your cable strikes strange notes. You demand vigorous action and protest the slothful inactivity in pursuit of your declared policy. I fight for this and now must struggle both ways without aid. To compromise now would determine the end of the RCAF as an entity overseas. To pour oil on troubled waters would avail nothing. Coming home would bespeak weakness which I cannot accept. I have done all with firmness, candour and truth conscientiously believing that I was right. I stand or fall on that come what may.[14]

In London, the Air Ministry and the RAF did not take kindly to Gus's letter and Portal, the RAF CAS, made his displeasure known to Ottawa with the effect that:

> Power, wanting to sweep the controversy under the carpet and thus keep it from the Prime Minister and his Cabinet colleagues, now abandoned his previous call to arms of "telling the RAF to go to hell" and rushed Breadner to London in February to appease Portal ....[15]

> Power's and Breadner's lack of support had the predictable two-pronged effect of undermining Gus's position and encouraging Air Ministry intransigence. However, the formation of the RCAF Bomber Group created the structure that did help the process along.[16]

It is certainly true that, in the near term, Gus's efforts saw only limited success. But in the long term, what a difference they had made, not only in the history of the RCAF, but more importantly to Canada as an independent nation, for after Germany was defeated, never again would RCAF personnel serve other than under Canadian command and control.

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As the commander of the RCAF overseas, he had many other concerns besides Canadianization, for now his flight had grown in size and complexity. When he took up his appointment, Canadians were arriving in England in ever increasing numbers, and by the end of 1943 almost 50,000 RCAF personnel were stationed overseas. He made extraordinary attempts to talk to as many of these men and women as he could, undertaking exhausting trips, flying thousands of miles, listening to the concerns of personnel on stations from the Shetland Islands at the northernmost tip of Scotland, through Central Africa and the Middle East, and on to the remotest outposts on the India/Burma border.

That the welfare of his troops was of paramount importance can be seen again and again in other actions he took. When he feared ground crews were not receiving the recognition they deserved, he devoted one of his radio broadcasts to Canada to explaining the vital role they played. He was also keenly interested in supporting the building of the Canadian wing of the plastic surgery hospital at East Grinstead; and finally, he wrote a personal letter to the next of kin of every airman killed overseas during 1942-43.

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During Gus's career, he was blessed with abiding friendships and a fiercely loyal staff, but with all the demands of that career, he never neglected his family. He had a happy marriage and kept in close touch with his widowed mother, and I was fortunate to have access to his wonderful letters to her which spanned a quarter of a century. His many outside interests included fly-fishing, golf, opera, and classical music; he was also an accomplished writer and remained an avid reader all his life.

To me though, one of his most endearing traits was his delightful sense of humour and of the ridiculous. As a teenager at boarding school, a cheque for my allowance was usually accompanied by a letter from a fictitious gentleman by the name of "A. Drehdful Skynflint O.B.E., Esq." who was the secretary of the infamous bank known as "Edwards, Skynflint, Edwards & Edwards Co. (Victoria) Limited." In case one was in doubt as to this bank's mission, its letterhead boasted "Loans, payments and debts made all over the world - Loans without Groans."

Perhaps the bank's mission statement was more truth than fiction when applied to Gus's personal finances, for the Air Force did not make my father a wealthy man; on the contrary, he was constantly in debt. When he retired in September 1944, his annual pension was fixed at the lofty sum of $5,845.25. In retirement, despite continuing financial worries and declining health, Gus's motto of "first, look after the troops" was still evident as he took on the role of President of the RCAF Benevolent Fund.

And, for what seems an extraordinary proposal for one so attached to his own service, he wrote an article in June 1946 titled "Unite the Fighting Forces," which was published in a three part series in the *Ottawa Citizen*. Certainly, the financial burden of maintaining three services in peacetime, for a country with a population at that time of only 12 million, was one of his reasons for recommending the changes. Others, most assuredly, were to reduce duplication of services, and eliminate the jealousies and rivalries among the services, which he thought adversely affected operations. As he wrote:

> Throughout the long lives of the army and navy and in the shorter one of the air force a compelling and purposeful tradition has grown, a spirited tradition of pride in themselves based on rivalry and competition not only among each other but also among the several units or organizations that comprise the whole.
>
> This tradition, though mainly gainful to the smaller units, has frequently brought about a state of isolation of one service from the other, a state which, in its worst form, created a separation which threatened disaster. As one war succeeds its predecessor the task of the three services becomes more and more a joint undertaking demanding more and more an advancement arm-in-arm, and more and more interdependence.[17]

I am certainly not qualified to compare Gus's ideas for unification with the actual events that took place in 1968 and beyond, but it might be an interesting subject for someone to pursue.

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Plagued by illness, he came close to death in 1947. It seems sheer willpower kept him alive that time, but his long struggle ended five years later and he was buried in Ottawa by his beloved Air Force, on the crystal clear, bitterly cold 29th day of February, 1952.

On that same day, another air marshal, John Plant, expressing his sympathies to my mother from his posting in France, wrote:

> To me Gus was always much more than a mere senior Air Force officer, he was in many ways more like a father. From him I learned much about the ways of men; from him I learned a philosophy on loyalty—that it spreads downwards as well as upwards, for when I have been in trouble he has helped me, when I have been successful, he has praised me.
>
> Like all who had the good fortune to serve with him, I shall always regard him as the greatest of the Air Force. I shall always remember him as a man whose unselfish loyalty and perseverance was indeed the motto of the R.C.A.F.—Per Ardua ad Astra. To him, more than to any other person goes credit for the position of the R.C.A.F. today.[18]

Notes

1. Suzanne K. Edwards, *GUS: From Trapper Boy to Air Marshal,* (Renfrew ON: General Store Publishing House, 2007) 1-2.
2. Ibid., 16.
3. Ibid., 25.
4. Ibid., 62.
5. Ibid., 85-86.
6. Ibid., 85.
7. Ibid., 163.
8. Ibid., 91.
9. Ibid., 106.
10. Ibid., 105. NB: Footnotes 10 to 16 are taken from Chapter 10 of the book, which summarizes the account of Canadianization in Chapters 2 & 3 of *The Official History of the Royal Canadian Air Force Volume III, The Crucible of War 1939-1945*, by Brereton Greenhous et al.
11. Ibid., 111.
12. Ibid., 119.
13. Ibid., 114.
14. Ibid., 115.
15. Ibid., 115.
16. Ibid., 115
17. Ibid., 218.
18. Ibid., 225.

Suzanne K. Edwards

Born in 1931, Sue Edwards attended schools in Ottawa, Halifax, Vancouver and Montreal after which she spent two years at McGill University studying towards a BA degree.

Following McGill, she entered the business world in Montreal where her planning and organizational skills led to a diversified career in office management. In the 1960s she established her own company which specialized in the management of associations and conferences, both national and international.

She became interested in wood sculpture and her business travels in Canada, Europe, the Middle and Far East provided the opportunity to observe and study sculpture in other countries. Following the sale of the company in the late 1970s, she made a full-time commitment to life as a sculptress, producing both realistic and stylized pieces. Her most ambitious single work was the recreation of the famous "Lewis" chess pieces, photos of which appeared on the cover of the Lee Valley catalogue in May 1993. She has also received numerous awards for her works which are held in both private and corporate collections in Canada, the USA and the UK.

Sue returned to the business world in the Toronto area during the 1990s before retiring to Nova Scotia in 1997. Since then she researched and published a biography of her father, Air Marshal Harold "Gus" Edwards. Today, when not on the Digby Pines golf course seeking the ever-elusive goal of lowering her handicap, she continues sculpting.

Chapter 2

The Measure of a Leader: Squadron Leader L.J. Birchall (The Saviour of Ceylon)

Ernest Cable

The Royal Canadian Air Force's (RCAF) Second World War history is replete with remarkable accounts of individuals and operations in Europe, North Africa and the Battle of the Atlantic. However, much less is recorded about the RCAF's efforts in the "Forgotten War" in the East where the actions of one RCAF officer changed the direction of the war in the Indian Ocean. Squadron Leader (S/L) Leonard J. Birchall's sighting of the Japanese Imperial Fleet, while on his first patrol in a RCAF 413 Squadron Catalina, is credited by British Prime Minister, Sir Winston Churchill, with saving the strategic island of Ceylon (now Sri Lanka). Birchall and his crew were shot down and spent the remainder of the war as prisoners of war (POW). As the senior allied officer in a series of Japanese POW camps, S/L Birchall's selfless leadership under inhumane conditions personified the RCAF's motto "Per Ardua Ad Astra" (Through Adversity to the Stars).

After graduating from the Royal Military College, S/L Birchall completed his pilot training course in May 1938 and subsequently graduated from the Air Navigation and Seaplane School at Trenton, Ontario, in November 1938. His first posting was to No. 5 General Reconnaissance (GR) Squadron which was equipped with Stranraer twin-engine, biplane flying boats and based at RCAF Station Dartmouth.[1] On 10 September 1939, Birchall flew one of the RCAF's first missions of the Second World War; he took off from the water at Dartmouth's Eastern Passage in Stranraer No. 907 to patrol the approaches to Halifax's strategic harbour. After a hectic tour on No. 5 Squadron, Birchall was transferred to a newly formed flying boat squadron in Scotland in mid-1941.

No. 413 (GR) Squadron was formed in Scotland on 1 July 1941. This was the RCAF's eleventh squadron to be formed in Great Britain; it was the third squadron (after 404 and 407) and first flying boat unit to be assigned the Royal Air Force's (RAF) Coastal Command.[2] Shortly thereafter S/L Birchall joined the squadron bringing with him his 5 Squadron background to bolster the coastal reconnaissance experience level of the newly formed squadron. No. 413 Squadron, based in Sullom Voe in the Shetland Islands, was supposedly an RCAF Squadron but due to lack of available Canadian personnel, the great majority of squadron members were from the RAF.[3]

The squadron's Catalinas were a twin engine, high-wing flying boat that operated from moorings on the water. The crew of nine had sleeping accommodations, a stove and refrigerator and was reasonably self-contained. The aircraft, built in the United States, retained their long-range tanks that were installed for the overseas ferry flight from Bermuda to England and hence could stay airborne for 32 hours. The normal patrol duration out of the Shetlands was 24 hours.

No. 413 Squadron operated in the antisubmarine and convoy escort role from Sullom Voe until February 1942 when the squadron received orders to hurriedly move to Ceylon. In their relentless conquest of Southeast Asia, the fall of Hong Kong and Singapore had prepared the way for the Japanese advance into the Indian Ocean. To counter the Japanese threat, Great Britain built up its Eastern Fleet and strengthened its base in Ceylon. The situation in the Indian Ocean was serious. Resources destined for Hong Kong and Singapore, which were captured by the Japanese, were diverted to Ceylon as the Allies scrambled to amass more forces in the Asian theatre to stem the Japanese advance. These included modern fighters, experienced pilots, anti-aircraft batteries, radar installations and the Catalinas of 413 Squadron. In Ceylon the squadron would perform the same maritime reconnaissance duties as in the Shetland Islands.[4]

The British Eastern Fleet consisted of only two aircraft carriers, with obsolete Swordfish and Fulmar aircraft; five battleships, of which only one could be considered modern; one cruiser, five light cruisers and numerous destroyers. This fleet, which was cobbled together at the last minute, had little opportunity to train to become a cohesive force. Furthermore, there were no fighters to provide air cover, rendering their antiquated torpedo bombers all but useless. The lack of air cover also meant that the fleet could not draw enemy ships to within range of their battleships' guns without risking attack from enemy aircraft.

No nation in history had ever conquered as much territory as Japan in such a short time. The Japanese fleet's speed of advance was expedited by not having to lose time in ports to make repairs, as her warships had sustained only superficial damages from previous battles. Although Japan's interests lay in Eastern Asia she had to defeat the Americans in the Pacific before she could achieve her objective of capturing the natural resources of greater East Asia. Japan was confident that America could be eliminated as an effective force in the Western Pacific. She was equally certain that Germany would succeed in the Middle East and Russia, and the German U-boat fleet would cut off Britain from American help. Thus Japan's military and naval forces continued to press forward on every front. Admiral Raeder, the German Naval Commander-in-Chief in a prepared report to Hitler dated 13 February 1942, wrote:

> Japan plans to protect this front in the Indian Ocean by capturing the key position of Ceylon, and she also plans to gain control of the sea in that area by means of superior naval forces. Once Japanese battleships, aircraft carriers and submarines, and the Japanese Air Force are based in Ceylon, Britain will be forced to resort to heavily escorted convoys if she desires to maintain communication with India and the Near East.[5]

The Staff of the Japanese Combined Fleet prepared plans to strike westward into the Indian Ocean and seize Ceylon. They even prepared follow-on plans to take over Madagascar, which was still in Vichy French hands. The Germans did everything to persuade the Japanese to initiate these operations, which would give tremendous support to its war effort against the British. They even provided the Japanese with intelligence on suitable landing sites in Ceylon.[6]

No. 413 Squadron moved from Sullom Voe to Pembroke Dock, Wales, to prepare for its deployment to the East. On 19 March, S/L Birchall was the captain of one of two squadron Catalinas to depart Pembroke Dock for Gibraltar on the first leg of the trip to Ceylon. The squadron's aircraft were armed with a single Lewis gun in the front turret and twin Lewis guns in each side blister, but had no self-sealing tanks or armour. Three long-range auxiliary fuel tanks were installed in the hull and the aircraft were to be loaded to their maximum all-up weight with supplies. Since the Catalinas were large and cruised at a leisurely 100 knots they were very vulnerable to air attack. So the crews elected to fly the first legs of their transit at night even though there were no flame suppressors on the exhaust stacks; making the Catalinas look like flying Christmas trees against the night sky. From Gibraltar Birchall flew down the Mediterranean to Cairo. He then carried on to Basra, Iraq and to Karachi, India. On this last leg the autopilot in the second aircraft went unserviceable so Birchall carried on alone overnight to the RAF seaplane base at Koggala Lake, the final destination in Ceylon.[7] Koggala Lake is located just south of Galle on the west side of Ceylon. The lake is very small, is surrounded by towering coconut palms and is filled with coral reefs. Although a take-off and landing path had been cleared through the reefs, it took practiced skill to come in over the trees and get the aircraft down on the water before running out of landing space.

The situation at the base was greatly confused, but all realized that battle was imminent and the Allied position was desperate. The Station Commanding Officer (CO) briefed Birchall on the serious deficiency in long-range patrol aircraft and the details of stationing 413 Squadron at Koggala. Because of radio silence there was no information on Allied ships' movements. Therefore, the CO asked Birchall if he could fly a patrol the next morning to a secret Royal Navy (RN) base to deliver messages and to bring back information on the location of British ships and their future intentions. Since the flight was in daylight, Birchall eagerly accepted. An RAF Catalina was scheduled to patrol up into the Bay of Bengal and a Dutch aircraft was tasked to patrol over the Indian Ocean south of Ceylon. About midnight the CO briefed that the Dutch aircraft was now scheduled for the patrol to the RN base and asked Birchall to take the southern patrol. Birchall's crew was scheduled to leave early in the morning and return to Ceylon during the night, but they could cruise around until daylight when they could land. With their long-range tanks, 413 Squadron's Catalinas could easily complete this mission so Birchall accepted the revised tasking.[8]

The Japanese had surpassed even their most optimistic targets and time scale. The Allied quandary was where the Japanese would attack next. There were three possible strategic options: to advance on Australia, India or Hawaii, each with its own strong advocates. While the arguments raged back and forth, Japanese Admiral Yamamoto decided to put the British Eastern Fleet out of action and remove the Indian Ocean threat.

In accordance with Yamamoto's strategy, Vice-Admiral Nagumo with substantially the same force that he led against Pearl Harbour departed the Celebes Sea, in Indonesia, on 26 March. Steering

southwards, Nagumo entered the Indian Ocean via Ombai Straits between Flores and Timor. A smaller diversionary force, known as the "Malaya Force," sailed from Mergui Burma a few days later in order to enter the Indian Ocean at the same time as Nagumo's First Air-Fleet. The Malaya Force was to operate northeast of India while Nagumo tried to seek out and destroy the British Eastern Fleet near Ceylon.[9]

Meanwhile, limited only by the demand for men and equipment in all the other war theatres, the Allies took all measures possible to reinforce Ceylon. General Layton was appointed Theatre Commander and he immediately put his new powers to work in an effort to fortify Ceylon; airdromes were built and aircraft were ferried into them. Radar was practically non-existent so long range air reconnaissance was critical.

Commander-in-Chief of the Eastern Fleet Admiral Sir James Somerville, who had just arrived in Ceylon on 24 March, reviewed his fleet's assets. The only modern battleship was the *Warspite*, laid down early in the First World War but modernized with an armoured deck. The remainder of his naval force consisted of carriers *Indomitable* and *Hermes*, the light cruisers *Dragon*, *Caledon*, *Emerald*, *Enterprise*, *Dorsetshire* and *Cornwall* and six destroyers. A Dutch cruiser and destroyer completed the force. There was no time for any fleet training. Somerville immediately put to sea and made plans on the assumption that the enemy would approach from the southeast. Somerville based his fleet at Addu Atoll, the secret naval base located 600 miles (1000 kilometres) southwest of Ceylon—the island atoll to which Birchall had originally been scheduled to fly. At Addu Atoll the fleet was joined by four battleships: *Resolution*, *Revenge*, *Ramillies* and *Royal Sovereign*.[10]

Intelligence led Somerville to believe Nagumo had sailed from Singapore and therefore, estimated his arrival in the area on 31 March. When the fleet did not materialize by 3 April, there was a strong feeling that the whole thing was a false alarm. The cruiser *Dorsetshire* was ordered back to Colombo to continue her refit together with her sister ship, *Cornwall*. The carrier *Hermes* was ordered back to Trincomalee with the destroyer *Vampire*. The remainder of the fleet returned to Addu Atoll for refuelling.

Nagumo had one vital task, to find and destroy what remained of British sea power in the East. Japanese intelligence reported a build up of aircraft and naval power but Nagumo had air and naval superiority. He had 6 aircraft carriers each with 54 bombers and 18 fighters; 4 battleships; 2 heavy cruisers; 1 light cruiser; 11 destroyers and 7 submarines. This force was well trained and had proven themselves at Pearl Harbour and other encounters. He expected to find the British ships at Trincomalee, Colombo or in Ceylonese waters and was confident that he could locate and destroy them. Somerville and the Admiralty were well aware of the Japanese superiority and the British could not afford the risk of seeking combat, as a defeat would allow Japan to invade Ceylon and India, thereby allowing the Axis powers to "close the ring" around the Asian, North African and European theatres of war.[11]

In the early morning of 4 April, Birchall's crew took off from Koggala Lake in Catalina "A." They were tasked to conduct a crossover (ladder) patrol about 250 miles (415 kilometres) southeast of Ceylon. The tactic was to search an area during daylight far enough out from Ceylon that the enemy could not sail in during the night and launch an attack at dawn. The crew planned to be at about 2000 feet (700 meters) so that they could spot anything on the water including periscopes of submarines that could be scouting in advance of the fleet. Because of the lack of information on the whereabouts of the British fleet, the crew was briefed to positively identify all ships and record their position, course and speed.

Birchall flew out to the assigned patrol area and arrived just as the sun was climbing over the horizon. From then on it was an uneventful monotonous day, flying the search pattern 150 miles (250 kilometres) east, 50 miles (85 kilometres) south, 150 miles west, 50 miles south, hour after hour. It was a cloudless bright day and visibility was unlimited. The only navigational aid was the sun, and the navigator, Warrant Officer (WO) "Bart" G.C. Onyette, constantly plotted position lines based on his sextant observations. The sun produced only one position line but he needed two position lines to ascertain their geographic position with certainty. Onyette was not too concerned because on the way back to Ceylon after dark there would be plenty of stars from which to plot an accurate position.

The day wore on until Birchall's crew came to the end of their search pattern. During the final leg the navigator advised Birchall that the moon was just rising and that if they flew another leg he could get a good sun-moon cross fix to accurately plot their position and calculate an accurate course back to Koggala Lake. Since they had to remain airborne until daybreak, Birchall agreed to fly the additional leg.

Onyette took his fix and found that the Catalina was much farther south than tasked. Birchall continued on and just at the most southerly point as he set course for home he saw some specks on the south horizon. Birchall altered course to investigate as per his orders to report the position of all vessels found in his search area. As they approached closer there were more specks that eventually started to take the shape of warships. With plenty of time and fuel remaining to return to Koggala, the crew continued to close to positively identify ships. Since the navigator had just obtained a good fix, the warships' position could be accurately reported along with their course and speed. Once the Catalina was close enough to identify the warships as Japanese, it was too late! The crew did a hurried count and at 1605 universal time the wireless operator, Sergeant (Sgt) F.C. Phillips, sent a first enemy-sighting message. It contained the total number of ships seen, a breakdown of the types of vessels, their position and speed. The standard procedure was to repeat the message three times before waiting for an acknowledgement of receipt.[12]

The lead warship, a Japanese cruiser, opened fire as Birchall turned away. Three flights of Japanese Zero fighters attacked Catalina "A" from above. The Catalina returned defensive fire from the nose and blister positions, but without effect. There was no cloud cover, nowhere to hide. Halfway through the third transmission of the sighting report, the wireless compartment was hit with an explosive 20-millimetre shell, severing all communications and seriously injuring Sergeant Phillips. Birchall tried to evade to no avail. The fuel tanks in the wing were punctured, and since they were not self-sealing, flaming gasoline poured down into the fuselage and into the hull where the long-range tanks were located. The crew extinguished the fire twice but then it broke out in earnest. Sergeant Calorossi, one of the air gunners, was hit in the leg with a shell and his leg was blown off. The front gunner, Sergeant Henzell, took a burst dead on, shrapnel and bullets were flying all over the place. Another explosive burst shattered the instrument panel, wounding Birchall in the leg but he continued to throw the badly damaged Catalina into evasive manoeuvres. The fire in the long-range tanks was now out of control.

It took the combined efforts of Birchall and his second pilot, Pilot Officer (P/O) P.N. Kenny to keep the aircraft flying. The crew's only chance for survival was ditching the Catalina; the aircraft was very difficult to control but the two pilots managed to force land the flaming Catalina on the water. The crew put Mae Wests on the two badly wounded crewmembers and threw them into the water. Sgt Calorossi, the air gunner without the leg, went down with the aircraft. The rest of the crew put on their Mae Wests, lept into the water and swam feverishly away from the burning gasoline on the water. Pulling the injured with them, they feared that the hydrostatic fuses would cause the depth charges to explode as they sank.

After the Catalina sank, the Zeros strafed the crew in the water. The uninjured survivors dove under the water and watched the bullets change direction after hitting the surface. The two seriously wounded crewmembers, whose injuries prevented them from shedding their Mae Wests to seek cover under water, were killed. When the strafing ceased the survivors then had to worry about sharks as most of them were bleeding in varying degrees. Eventually the Japanese destroyer, *Isokaze*, picked up S/L Birchall, P/O Kenny, W/O Onyette, Sgt Phillips, Sgt Cook (flight mechanic) and Sgt Catlin. The air gunners, Sgt Davidson and Sgt Henzell, were dead.[13]

The six survivors were then placed on the foredeck. Three had relatively minor injuries. The remaining three had serious wounds—one suffered from shrapnel embedded in his left hip, the second had multiple fractures in his right leg from a machine gun burst and the third had his left arm shredded by machine gun rounds. A Japanese interpreter who had spent a lot of time in the United States appeared on the scene and asked for the senior officer. Birchall stood to identify himself and was immediately beaten. The Japanese were very interested in knowing if the crew had transmitted a sighting report. Birchall denied that the message was sent, which immediately prompted P/O Kenny to whisper to the wireless operator that he was now an air gunner so that he could feign ignorance about any communications. The question about the sighting report was asked several times between beatings but the crew stuck to their story. Just as they had convinced their interrogators, the Japanese intercepted a message from Colombo asking for a repeat of the sighting message. The six survivors were beaten and then jailed in a paint locker in the bow. Requests from Colombo for a repeat indicated to Birchall that the British had not received the message; this was sad news indeed for the crew.

Back in Ceylon the message was in fact received; although garbled, it was intelligible and relayed immediately to Admiral Somerville. A listening watch was kept all night for Catalina "A" and when it failed to arrive in the morning it was presumed to have been shot down. Birchall's warning indicated the

enemy fleet to be 360 miles (600 km) to the south-southeast of Ceylon, which meant that Ceylon could be attacked early next morning. That night a second Catalina from 205 Squadron captained by Flight Lieutenant (F/L) Graham was sent out to relocate the Japanese. Between midnight and 0100 hours Graham signalled that he had sighted a Japanese destroyer 200 miles (330 km) southeast of Ceylon. No further word was ever heard from Graham and the eight other members of his crew.

As a result of Birchall's warning, the *Dorsetshire* and *Cornwall*, which had returned to Colombo, were ordered to sail immediately.[14] They departed at 2200 hours to rendezvous with Somerville who had left the Addu Atoll with the faster elements of his fleet at midnight to probe eastwards toward the Japanese. The *Hermes* flew off her Swordfish torpedo-bombers to reinforce the two squadrons of RAF Hurricanes and a few Fleet Air Arm Fulmars at Colombo. Also, 160 miles to the east, at China Bay near Trincomalee two squadrons of Hurricanes and Fulmars waited for the attack, which was expected the next day, Easter Sunday.

At dawn on April 5th, Nagumo steamed to within 200 miles (330 km) of Ceylon and launched 125 aircraft under command of Mituso Fuchida who had led the raid on Pearl Harbour. The Japanese aircraft climbed on course for the southwest coast of Ceylon and then planned to fly well clear of the coast to Colombo. Despite being detected along the coast both by radar and visually, no warning was given; everyone thought they were friendly. Even another Catalina out on early patrol sighted the aircraft, but having been briefed to expect British carrier-borne aircraft in the area, the crew did not report them. This Catalina did, however, sight the Japanese fleet and radioed a report. Thus despite having been on the full alert since dawn, the Japanese aircraft arrived overhead and unannounced at 0750 hours.

The fight was short and furious. Colombo was severely bombed and fuel installations destroyed. Thanks to the timely dispersal from the harbour, shipping losses were not as severe. The *Hermes*' six Swordfish, which arrived in the middle of the battle, were shot down. The RAF and the Ceylon air defences claimed to have destroyed 24 enemy aircraft, with 7 probably destroyed and 9 damaged. The Japanese in turn claimed to have shot down 19 of the 42 fighters launched, including 15 front line Hurricanes. Despite the British losses, however, the Japanese had not succeeded in their main objective—the destruction of the British Eastern Fleet.

Fuchida, who was leading the raid, intercepted a message from a Japanese reconnaissance plane, which indicated that the British were about to launch a surface attack on the Japanese Fleet. The message, which Fuchida had intercepted, was actually a sighting report, locating the *Dorsetshire* and the *Cornwall* attempting to rejoin Somerville's fleet sailing from Addu Atoll. The Japanese, holding a second wave of bombers in reserve in the event they located the British fleet, struck quickly at 1340 hours and eight minutes later the *Dorsetshire* was sunk. The *Cornwall* followed her to the bottom very shortly after. Of the 1,546 officers and men, 1,122 survivors were picked up after 27 hours in the water. Thus ended Easter Sunday 1942.

Allied intelligence believed that the invasion of Ceylon was imminent. The fall of Ceylon would greatly assist the Japanese Army's drive through Burma to India and their eventual conquest of the Asian subcontinent. To repulse the invasion, Somerville played a game of deception not only to avoid defeat by the Japanese but to pose a threat to the invasion. For the next three days the Japanese deliberately allowed themselves to be seen by reconnaissance aircraft to lure the smaller British fleet into battle. Somerville avoided this at all costs.

When Vice Admiral Nagumo did not find the Eastern Fleet at Colombo, he assumed that the British had either sailed after receiving Birchall's message or were perhaps at Trincomalee Harbour on the other side of Ceylon.[15] In fact, Somerville kept his fleet at sea, believing that since the Japanese had made no further strikes on Colombo they may attack his secret base at Addu Atoll. After a few days when no attack materialized Somerville approached Addu Atoll tentatively from the west in order to resupply.

Nagumo stood well clear of Ceylon, but on 8 April a Catalina sighted the Japanese fleet 500 miles (830 km) southeast of Ceylon steaming at full speed for Trincomalee. This aircraft managed to evade the Japanese fighters and escape to Koggala Lake. Somerville now knew Nagumo's next target.

Once again Trincomalee Harbour was cleared. The most important ships were the aircraft carrier the *Hermes* and her escort the Australian destroyer *Vampire*. In order to give full support to the air defence of Trincomalee, all the aircraft from the carrier were left ashore. On 9 April, F/L Thomas of 413 Squadron, Flying Catalina "Y," took off from Koggala Lake and headed east to locate the enemy fleet. Soon after dawn, at 0700 hours, he sent a sighting report giving the position, course and speed of

the Japanese fleet. The message broke off suddenly and contact was never regained. The aircraft was lost with all its crew but the warning had been given.

Twenty-five minutes later, approximately 100 Japanese aircraft appeared over Trincomalee Harbour. Radar and F/L Thomas' message alerted the defenders who were better prepared than for the last attack on Colombo. Despite the defenders' bravery the bombers severely damaged the airdrome and harbour, and many workshops and buildings were destroyed. However, the Japanese success came at a cost as the RAF and anti-aircraft gunners claimed 15 enemy aircraft destroyed, with 17 probably destroyed and 5 damaged.

Meanwhile, Japanese reconnaissance aircraft located the British carrier, *Hermes*, which, was returning at full steam to Trincomalee. The Japanese bombers launched an attack immediately sinking *Hermes* and her destroyer escort *Vampire* in short order. As dusk fell, Nagumo and Ozawa retired towards the Andaman and Nicobar Islands. Ceylon's trials were over and Nagumo's fleet retired from the Indian Ocean.

Admiral Somerville was not aware of the Japanese retreat so he maintained an air search for several days in a vain attempt to locate the enemy fleet. Until the Japanese fleet could be located he withdrew his Eastern Fleet to the west coast of Africa and did not return to Ceylon until September 1943.

Despite the number of ships and aircraft destroyed and damage to the harbour and airbase installations, Nagumo had failed his primary task to destroy the British Eastern Fleet.[16] This battle marked the first time that the Allies had stopped the western expansion of the Japanese and raised much needed morale. Sir Winston Churchill claimed that this battle had important strategic results, which could not be foreseen at the time. He wrote:

> Admiral Nagumo's now celebrated carrier force which had ranged almost unmolested for four months with devastating success, had on this occasion suffered such losses in the air that three of his ships had to be withdrawn to Japan for refit and re-equipment. Thus when a month later Japan launched her attack against Port Moresby, in New Guinea, only two of the five carriers were able to take part. Their appearance at full strength then in the Coral Sea might well have changed the entire course of the war.[17]

Birchall and his crew were unaware that their initial sighting of the Japanese fleet had set off a series of events that changed the course of the war in the Indian Ocean. On 7 April, they were transferred from the destroyer *Isokaze* to Admiral Nagumo's flagship, the aircraft carrier *Akagi*. Sergeants Cook, Phillips and Catlin were finally taken to the ship's hospital for treatment. The remaining three were kept in a hot, stale aircraft repair well under bright lights. They were fed a sailor's ration of rice, soup, fish, pickle and tea. Each night, Birchall, Onyette and Kenny were taken individually to the officers' cabins for questioning and beatings with heavy clubs and bamboo sticks. Fortunately, the trio had worked out their story while confined in the paint locker on the *Isokaze*.[18]

En route back to Japan, the *Akagi* stopped to refuel in Singapore; however, Birchall and crew couldn't understand why they weren't put ashore and sent to a POW camp. The Canadians finally disembarked on 22 April when the *Akagi* docked at Yokosuka, Japan, the big naval base near Yokohama. The three wounded went to a naval hospital. Birchall, Onyette and Kenny were marched down the streets to a railway station amidst insults from an enraged public. The train finally arrived at Ofuna from where they were marched through the countryside to their first POW camp.

Here, they found out why they were brought back to Japan rather than being imprisoned in Singapore. Ofuna was a special interrogation camp controlled by the navy, and since prisoners were not reported to the Red Cross they could be killed at any time. Pairs of prisoners lived in two-meter square rooms, under bright lights and with a glass window in the door for constant observation by guards. Birchall shared a cabin with a pharmacist mate captured at Kiska Island in the Aleutians. No talking was permitted, and to say one word resulted in severe beatings. Each person had one blanket and a beanbag pillow. The amount of food was below starvation level; hence sickness was rampant. Exercise, once a day, consisted of walking around the exercise yard in single file for a precious few minutes. Prisoners were also given some instruction in the Japanese language, sufficient to ask the guards to go to the toilet, to get water when sick and other small requests.

The purpose of the camp was to keep a live dictionary of the enemies' military trades. Each day an interrogation team came to the camp and questioned prisoners of whatever trade they were interested in. These sessions always started and ended with beatings. The only escape, other than death, was if

the Japanese captured a more up-to-date serviceman of the same trade. For their Japanese studies the prisoners were given paper and pencils, which were also used to write clandestine notes to pass information. It was agreed that whoever got out of the camp would take a list of names of those still alive to give to the Red Cross. Among Allied prisoners, this camp had one of the worst reputations because the guards believed they would not be held to account for their actions. Birchall later had the pleasure of testifying in the war crime trials against the guards in this camp. His testimony resulted in the highest percentage of death sentences given to any of the camps.[19]

Eventually, an American PBY flying boat (Catalina) crew arrived at Ofuna and Birchall's crew was released toward the end of 1942. They were taken to a brand new POW camp in Yokohama where they were the first prisoners. The new camp consisted of a single large room constructed underneath the stands in the former Imperial Oil baseball stadium. The room contained three tiers of wooden shelves, about 6 feet (2 m) wide. The officers had a small room with one 6-foot wide shelf for a bed. Straw was strewn on the shelves and the soldiers found paper to put under the straw for more warmth. Birchall and his crew had no belongings other than the clothes on their backs and had to rely on the generosity of others for comforts such as blankets. There were a couple of small stoves in the large barrack room but very seldom was there anything to burn. There was also a small shelf over the head of the sleeping shelf where the men kept their treasures, such as sewing needles, scissors and knives. Anything likely to be confiscated was hidden and each man had his own hiding place. Searches by the guards were carried out at least once a week.

A group of British POWs from Hong Kong arrived at the camp on the same day as Birchall. These prisoners turned out to be a rough bunch of troublemakers that the Japanese had sent from camps in the south to work on the mainland. With the rank of Squadron Leader, Birchall was the senior POW and hence camp leader responsible for the welfare of the POWs in his camp. The first thing Birchall encountered was mass hostility from the troops. Birchall learned that in the Hong Kong POW camps many of the officers had let the troops down by looking after themselves first. They had more food, cigarettes and access to contraband, which created severe hatred among the troops. The net result was that the troops distrusted these officers and held them in utter disrespect. The officers who had accompanied the Hong Kong POWs to Japan were the exception. They had tried to fight for their men not only against the Japanese but also against their own officers.

The first night Birchall convened a conference in the officers' room. After long debate Birchall convinced all the officers to agree on a single objective, to do the best they could for the entire camp. In the next few days the officers set up sections with senior NCOs in charge. They had daily sick parades and tried to collect all the medicines and drugs in the camp. Here again they ran into severe hostility. The men hoarded their medicines or drugs like gold, as there were no medical supplies provided and the men had to rely on their own resources. The men knew that the medicine in their possession may not have been suitable for their particular ailment, but it could be bartered for the medicine that was needed. Medicine stood between the men and death, so to convince anyone to part with his precious supply was next to impossible.

Birchall and the officers soon realized that their only hope was to restore a vestige of mutual respect in the camp. Somehow they had to convince the troops that their greatest chance of survival was working together. The first improvement was the officers' supervision of the preparation, cooking and distribution of food. The buckets of rice were weighed in order to ensure fairness in its distribution. They ensured that the vegetables were evenly distributed in the soup. The officers' food buckets were dished out in full view of all the POWs. Anyone who thought one of the officer's portions was greater than their was free to change their bowl for the officer's. In the beginning some soldiers tried to beat the system by eating some of his own food and then changing his bowl for an officer's. When nothing was said or done by the officers, the cheaters soon found that they had only earned the enmity of their friends. The effect of involving the troops in the food routine was immediate. Eventually, the officers had to watch their food as the troops tried to give more to any of the officers who were sick.[20]

Trust in the officers further improved when Birchall introduced a camp policy to protect the troops. Leading by example, Birchall was the first officer to jump between a prisoner and the Japanese guard when a man got into trouble. This action gave time for the prisoner to get lost in amongst the other POWs and stunned the Japanese for a moment or two. Usually, the officer got away with a less harsh beating than the man would have received. After a few such incidents, the respect started to build once again, not only for the officers but also the self-respect within the troops, which was essential for survival.

Under Birchall's leadership the POWs started down the long road to survival. The POWs had been a bunch of ruffians and had suffered for their misdeeds. The usual punishment was to take away rations which were at the starvation level at the best of times. With insufficient food their ability to resist disease was greatly reduced and the majority of the POWs became sick. Many had diseases caused by malnutrition such as scurvy, pellagra, boils and dysentery. Malnutrition affected the nerve endings with the result that their feet became hot and sore. It became so bad that the men would put their feet into buckets of cold water or just walk around on the cold cement in bare feet. Eventually, the skin cracked and gangrene would set in. A couple of POWs lost their feet before the officers were able to dissuade them from soaking and walking on the cold floor. Nerve-end deterioration also affected the eyes, which could result in blindness. Unfortunately, both the hot feet and blindness never could be cured. To his dying day, Birchall's feet got hot when he tired.[21]

Under Birchall's direction, the officers were able to incrementally improve the health of the camp. Unknown to the Japanese, the POWs held their own sick parades since one of the POWs was a doctor from the Hong Kong reserves. As the standard of health improved the men started to surrender drugs and medicines to the POW organization. It became obvious to the troops that only in dire circumstances would an officer be given any medicine and many times the officers refused medication just to prove the point. During this period one POW turned in three morphine pills, which were the only sedatives or painkillers in the camp. Birchall reached an agreement that only with the unanimous approval of the camp would one of the morphine pills ever be used. Strangely enough there were numerous surgeries including amputations when the doctor recommended the use one of the pills. A vote of the camp was taken and in every instance the man who was to be given the pill always cast the one negative vote. The surgeries would proceed without the pills and it took several men to hold the patients down and muffle the screams. When Birchall left that camp two years later the three morphine pills were still unused.[22]

The Stadium Camp was a central pool from which POWs were hired out to various companies to do manual work. Usually, the work details were given the night before, giving the officers time to assign the men in accordance to their health. Those too sick to work but still able to walk would go to jobs where their pals would cover for them. The big difficulty came when there was an insufficient number of men capable of walking to work. The sick were paraded before their guards and beaten in an effort to get them to go to work. This always ended in the officers intervening and receiving a good thrashing. The Japanese could never be convinced that if they wanted the men to work it was in their best interest to get the sick back to health as soon as possible. Instead, the sick were beaten, no medicines were provided and the rule of "no work—no food" was enforced.

The Japanese had a penchant for keeping diaries so the POWs were issued with small writing books and pencils. To test the system the men made entries such as: Today it was cold. Today it was wet. Today I worked, etc. As suspected, at the end of the first week all diaries were confiscated and perused for information about any clandestine activities. They were returned the next day but the Japanese continued to collect them periodically for examination. The Japanese had unwittingly provided a source of materials for keeping a secret official diary and camp records. Each night Birchall meticulously recorded the events of the day and started to keep secret records. Every man was listed along with his regiment, service number and next of kin along with a general dossier recording sicknesses and injuries. These records were used as evidence in the war crime trials (which followed after the war) and for substantiating pensions for prisoners or their widows.[23]

When each record book was finished it was boarded up in the walls. The book in current use was hidden with the secret medicine supply, which was kept in the false bottom of a box that the Japanese had directed to be built to hold the diaries, pencils, toilet paper and clothing that were issued. The men also found every nook and cranny in the building so that they were able to hide just about anything they wanted. They even found a small hideaway in the jail where they stored some hard rations and reading material. These provisions were used by the prisoners who were placed in solitary confinement on starvation rations. The guards never did find the hideaway, which was used by everyone who went into solitary, including Birchall.

The work sites provided an excellent opportunity to steal the food intended to feed the factory workers. Stealing was easy but getting the contraband home was another problem. Despite searches by factory and camp guards there was a steady flow of goods into the camp. To ensure that smuggled materials were used in the best interest of the camp, Birchall established an organization to record and

distribute the various goods. The sick had peanut oil and scraped coconut added to their rice. A stolen consignment of condensed milk helped the sick tremendously. Contacts in the brick works and boat plant were used to trade soap and cooking oil for drugs. Soon the POW organization had to control the steady flow of goods going out of camp to be converted into medicines such as sulpha drugs, aspirin and ointments.

Through Birchall's efforts, the improved health in the camp increased morale. By the time the cold weather arrived, the POWs had even started to build up reserve energy and resistance to disease. Soon, a contingent of American POWs arrived from the Philippines. Similar to the morale problems experienced with the Hong Kong POWs, the American soldiers distrusted their officers. However, with Birchall's leadership and selflessness that had won the confidence the Hong Kong POWs, it was not long before the Americans, too, were turned around. Fortunately, Dr. Kauffman of the US Army Medical Corps replaced the doctor from Hong Kong who had been sent to the POW hospital in Shinagawa. He proved to be an excellent replacement who worked day and night on behalf of the men.

The improved health in the camp was instrumental in the POWs surviving the first winter (1942-43) in Japan, which was quite severe. Sickness, colds and influenza abounded and some cases of tuberculosis were contracted. Once a POW became sick his resistance deteriorated, then all the malnutrition ailments such as pellagra, scurvy, boils and hot feet set in. When a soldier became too sick to work his rations were cut, further exacerbating the deterioration in his health. To counter the adverse effect on morale, Birchall instilled a resolve in the camp that all or none would survive. While about 35 percent of all POWs in Japan died that winter, Birchall lost only two men out of over 250.[24] These two men were sent to the POW hospital at Shinagawa and never came back.

Shinagawa was a special hospital set up in Tokyo for POWs. Nearly all the medically qualified POWs were sent there to work, but under one of the most sadistic men Birchall had ever known. He was known to beat and torture the sick. He thought of himself as a doctor, but he just butchered the men. The conditions were filthy, and food was scarcer than in the camps. The POW recovery rates were appalling. When Birchall discovered the deplorable conditions, he did everything possible to prevent the sick from being sent there. Only when he knew that death was imminent and inevitable did he allow the sick to be sent to the hospital. This was preferable to having a man die in the camp, as a death was exceptionally detrimental to morale. It took weeks to get over a death. Even then the camp was never the same as selfishness and self-preservation crept in, and soon the situation reverted back to every man for himself. The two POWs Birchall lost were beyond help and he was thankful to hear they had only lasted a matter of hours in Shinagawa; too quick to be further maltreated. Birchall had the pleasure of working on the prosecution team that dealt with this Japanese doctor and his guards at the war crimes trials. They all were given the death sentence.[25]

The second winter (1943-44) was no better than the previous one and again the "chronically ill" started to show their symptoms. The doctor kept complete records and could predict to within a few days when an individual would break out with pellagra or when another would contract dysentery. Some POWs cried for no reason and contemplated suicide. Birchall had to put POW guards on these patients day and night to keep them alive. He personally experienced this desperate condition, as he was one of the sick who would gladly have died if his guards had let him.[26]

Birchall learned why the Japanese were so intent on producing the maximum number of workers when he found out their Army gave a unit a yearly allotment of money to buy or rent its quarters, rations, clothing and equipment. When the money ran out the units were left to their own devices; therefore, looting and stealing were rampant in the Japanese Army. Depending on their aggressiveness, some units were wealthy while others were poor. Birchall's camp guard unit was poor and relied in large measure on the money they received for providing labour to various work sites.

On one occasion when the camp could not provide enough men to work, the sergeant in charge of the guards ordered all the sick out of bed to stand on parade where he proceeded to beat the men on their boils. Birchall lost his temper and attacked the sergeant. The fight was short and rough and after a few blows the sergeant was knocked down. Everyone was stunned but the damage was done. The sick dispersed among the crowd of POWs as fast as they could while Birchall waited for the fury to follow. He was put into solitary until the camp commandant returned after which he was beaten again and hung up by the thumbs. After a few more days of solitary he was taken to Tokyo for court martial. The trial ended with a long harangue and Birchall was sentenced to be shot. After the firing squad had loaded and aimed

their rifles, Birchall was told that he was dishonourable and only honourable people were shot. Birchall was then ordered to have his head cut off. After kneeling over and having the sword raised over his head, there was, again, a change of mind; Birchall was sent back into solitary for two weeks. It was then that Birchall appreciated the "cache" of hard tack and reading material that had been hidden in the solitary cell.

In early 1944 the main POW camps were broken up and Birchall with about 100 POWs were sent to a camp for the Asano Dockyards.[27] With the loss of their illicit sources of contraband the "chronically ill" started their downward spiral and the camp couldn't meet its quota of workers. The first time this happened, all sick were put on parade and the deficit was made up from their ranks.

The next morning the camp was again short on workers and once again the sick were paraded. When orders were given to march out the sick, Birchall ordered, "Halt" and everyone sat down. The Japanese responded with beatings, but Birchall explained that the men would not move until the sick went back to bed. After some time the guards gave in, the sick remained in camp and the troops moved out. About an hour later a group of guards from the Omori Camp arrived and escorted Birchall to Omori Camp, designated as a disciplinary camp for unruly POWs, in Tokyo.[28]

Before departing for Omori Camp, Birchall and Dr. Kaufman[29] arranged for all contraband, diaries, records and medicine to be left behind in Asano, as they knew they would be searched. Omori Camp was built on a small sand island in Tokyo Bay. The guards were particularly vicious and the Commandant enjoyed watching the punishment. After the introductory beating and being denied food for 48 hours they were released into the main camp. As a disciplinary measure Birchall had to work all day making haversacks, and then all night in the kitchens. He slept in five-minute naps whenever he could and was punished for any minor infraction by being forced at gunpoint to stand barefoot on the hot ovens holding two buckets of water.[30] With the nerves in his feet being particularly sensitive because of being malnourished, the pain was excruciating. His punishment lasted for two weeks before he was removed from the haversack factory and allowed to sleep between cooking shifts. The stealing was just as rampant in this camp as anywhere, but the contraband was not consolidated. Here, Birchall ran into his first and only encounter with POW "Barons" who controlled all the contraband and the coin of exchange was cigarettes. A POW's existence depended on giving up smoking and using the cigarettes to buy extra food and medicines. There was no POW organization to fairly distribute the contraband so dealing with the "Barons" was the only chance of survival. There were no POW organized medical parades or issue of medicines; it was every man for himself. Consequently, there was increased sickness and men were being continually shipped off to the Shinagawa hospital, never to return.

As a result of the firebomb raids in Tokyo, many of the industries where the prisoners worked were burned out. Consequently, groups of POWs were transferred to camps outside Tokyo. Since Birchall was one of the "undesirables," he was one of the first to be sent to a new POW camp at Suwa.[31]

The POWs arrived at the camp at night. There was no food or water; it was raining and cold. The wind blew straight through the barrack rooms, which had no light or heat. Birchall found that he was once more the senior POW and was shown the kitchen, which was an open area lean-to with a roof and no sides. There was very little rice and no millet or beans; only some bean paste for soup. Birchall looked at the ramshackle kitchen and then wondered how he was going to face the sick, wet, cold, hungry troops in the dark, cold barracks.

Birchall returned to the barracks. Before he could divulge the news about the sorry state of the kitchen, a Canadian sergeant introduced himself and asked if there was anything the Canadians could do. Birchall showed him the kitchen and the Canadians readily started work while Birchall fetched the necessary bits and pieces the men needed. The Canadians tore down a small building to get dry wood for the fire, and before everyone went to bed, all had a bowl of rice with some hot soup and tea.

The following morning Birchall found that the great majority of the POWs had been in camps that had no proper leadership or camp organization; consequently, they had experienced high death rates. Birchall was again confronted with the old attitude of "every man for himself." Eventually, Birchall convinced several of the officers to provide effective leadership and to work on behalf of the men. The Canadian and British troops were the biggest asset who did what they could to generate some spirit in the camp.[32]

Birchall found the Canadians, who had the least materials, to be the most resourceful. The British were not very adept at fixing things, but the Americans were good if given the materials. Since the Canadians could build or fix anything, they soon had their section of the barracks patched up and warm. They then helped the others to do the same. Next, the Canadians had the cookhouse going in very little time; while the Americans, once the Canadians stole some wire for them, re-wired the entire barracks to provide some light. There were no sanitation facilities whatsoever. However, the British foreign field service came through, and the camp soon had the typical "bogs" as they as were known in British parlance.

The camp was in a desperate state. While Birchall counted on the summer to build up the men's stamina for the winter, the health of the entire camp was deteriorating rapidly each day. Before long, three men had died and the number of sick increased each day. Once again the sick were paraded but these men were too far-gone to even stand up let alone trek to work. Birchall decided that drastic measures had to be taken.

Birchall and the officers selected a few reliable men who had stamina as well as the required morale. Birchall formed these men into four stealing teams; two teams to go out and steal and two teams to guard the false nailed section of fence through which they could exit and return to the camp. These clandestine preparations were conducted without the knowledge of the rest of the camp because collaborators were known to be in their midst. The first night out the two teams hit the jackpot by finding vegetable farms and the soups began to thicken. The teams revisited the gardens at least once per week.[33]

When Birchall learned through the interpreter that the Emperor had announced the surrender of Japan on the radio, he told the Commandant that he was taking over the camp.

Now, Birchall's major problem was that many of the men wanted to leave the camp on their own. Birchall was afraid that individuals could run into fanatics or soldiers who were still very belligerent. Birchall explained that they had to build up their health and then exit en mass to be assured of surviving the final days. Birchall had the men make British, American and Dutch flags out of old sheets and crayons, which were hoisted on flagpoles. The flags would give the men a sense of security and unity when they exited the camp together.

Birchall's next problem was to get the POWs to Tokyo. They departed the camp quietly at night in stolen trucks and drove to the train station where they commandeered coaches on a train bound for Tokyo. After arriving at the Tokyo station they could not find a single sign of the Allies. So Birchall had the troops commandeer trucks and drove to the electric train station where they took the train to Yokohama. Changing modes of transportation was not easy as Birchall had to ensure that the many who were very sick, blind or had lost feet or hands were helped onto the various transports. Finally, at Yokohama Birchall found the Americans who provided showers, new clothes and organized help from the Red Cross. Birchall had many of his records with him and turned them over to the Americans.[34]

En route to Canada, Birchall was detailed to remain in Manila where his record keeping caught up with him. He was detained for interrogation by the war crimes team who, even at that early stage, were setting the foundation for the prosecution of war criminals. It was at this meeting that Birchall first learned that the message warning of the Japanese fleet had been received in Colombo and resulted in him receiving the title "Saviour of Ceylon." Birchall immediately sent telegrams to all the other crewmembers that were en route home about the good news.

When Birchall returned to Canada he was promoted to wing commander and awarded the Distinguished Flying Cross for his perseverance in reporting the Japanese fleet while under attack and for his superb flying skills in ditching his flaming Catalina in the Indian Ocean. Even more impressively, Birchall was awarded the Order of the British Empire for his exceptional bravery and leadership while a POW. Under the most repressive, tyrannical conditions imaginable, he established clandestine camp organizations to obtain food and medicines and insisted on fair treatment of the POWs, especially the sick. These acts of selfless courage came at the expense of great personal hardship and torture.[35] But from the POWs' perspective, **Birchall's greatest contribution was his ability to instil a resolve to live that was absolutely essential for their survival in those inhumane conditions**. It is unfortunate that Churchill was unaware of Birchall's leadership in the prisoner of war camps when he dubbed Birchall the "Saviour of Ceylon"; the moniker bestowed by such a famous personage overshadowed Birchall's greater triumph of having saved the lives of hundreds of POWs.

The last chapter of the "Saviour of Ceylon" saga didn't occur until Canada's centennial celebrations in 1967. Prime Minister Lester Pearson gave a formal dinner and reception for each head of state that came to Canada, and Birchall was invited to attend the dinner for the Ceylonese. At this dinner, Prime Minister Lester Pearson related one of his personal experiences with respect to the Ceylon battle.

Pearson spoke of an event that occurred at a dinner at the British Embassy in Washington, either just before or after the end of the war. Someone asked Sir Winston Churchill what he felt to be the most dangerous and most distressing moment in the war. Pearson thought he would refer to the events of June and July 1940 and the imminence of invasion, or to the time when Rommel was heading toward Alexandria and Cairo at full speed or when Singapore fell. However, Churchill thought the most dangerous moment of the war was when he got the news that the Japanese fleet was heading for Ceylon and the naval base there. The capture of Ceylon, the consequent control of the Indian Ocean and the possibility of a German conquest of Egypt would have "closed the ring" and the future would have been black.

Churchill went on to say that disaster was averted by an airman, on reconnaissance, who spotted the Japanese fleet and, though shot down, was able to get a message through to Ceylon. The message allowed the defence forces there to get ready for the approaching assault; otherwise they would have been taken completely by surprise. Churchill believed that the unknown airman, who lay deep in the waters of the Indian Ocean, made **one of the most important single contributions to victory**.[36] He got quite emotional about it.

Pearson was pleased to tell Churchill that the "unknown airman" was not lying deep in the Indian Ocean but was still an officer in the Royal Canadian Air Force stationed down the street from the British Embassy where he was active in the Canadian military mission.

Churchill was surprised and delighted to know that the end of the story was a happier one than envisioned.[37]

Postscript

After the war Birchall became a member of the 1947 War Crimes Trials prosecuting team in Japan. He was subsequently promoted to group captain and was appointed Assistant Air Attaché, Canadian Joint Staff Washington, D.C. where the US government awarded him the Legion of Merit. As his career progressed he held many senior appointments in Ottawa, Paris France and North Bay, Ontario. In 1963 he was promoted to air commodore and served as External Affairs Chief Administrator for North Atlantic Treaty Organization and Commandant of the Royal Military College. He was also aide-de-campe to their Excellencies, Governors General Vanier and Michner. Although, he retired in 1968, Air Commodore Birchall continued to serve the Air Force in many ex-officio capacities. He is the only serviceman with five clasps to his Canadian Forces Decoration (CD) representing more than 62 years of service. He was awarded the Order of Canada in 2000 and served as the Honourary Colonel for 413 Squadron, his former wartime squadron.

Post Postscript

Air Commodore Birchall died of cancer on 10 September 2004. Birchall was active in the Air Force until his passing. On 5 July 2004, Birchall (413 Squadron's Honorary Colonel) was too ill to attend the squadron's change of command ceremony at 14 Wing Greenwood, Nova Scotia. So the squadron decided to hold the parade in Kingston, Ontario. For the ceremony the 89 year old Birchall was wheeled from his hospital bed to the nearby City Park in uniform; he wore his impressive row of 18 medals which included 5 clasps to his CD that marked over 60 years of service. Birchall was delighted with the honour his squadron paid to him; we as Canadians are honoured to have had such a selfless devoted leader serve our nation so gallantly.

Notes

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2. S. Kostenuk and J. Griffen, *RCAF Squadrons and Aircraft* (Toronto: Samuel Stevens Hakkert & Company, 1977), 102.
3. Paul Nyzik, "The Saviour of Ceylon," *Airforce* 22, no. 2 (Summer 1998): 4.
4. D. J Baker, *A History of 413 Squadron* (Burnstown, ON: General Store Publishing House, 1997), 1-6.
5. L. J. Birchall, undated speech to Canadian Forces Staff School, Toronto, circa 1982. Speech was serially reprinted in six editions of the RMC Foundation Newsletters, circa 1982-83.

6. Ibid.
7. Ibid.
8. Ibid.
9. Winston S. Churchill, *The Hinge of Fate* (Boston: Houghton Mifflin Company, 1950), 180.
10. Ibid., 178.
11. Ibid., 186.
12. Birchall, Staff School Speech.
13. Ibid.
14. Churchill, 179.
15. Ibid., 180.
16. Ibid., 186.
17. Ibid., 188.
18. Birchall, Staff School Speech.
19. Ibid.
20. Ibid.
21. Ibid.
22. Ibid.
23. Ibid.
24. Ibid.
25. Ibid.
26. Ibid.
27. Ibid.
28. Ibid.
29. While it is known that Birchall and Dr. Kaufman left Asano at the same time, it is not known which camp/hospital Dr. Kaufman was transferred to.
30. Dave Brown, "A Bitter Pill to Swallow," *Ottawa Citizen*, [October 1996?].
31. Birchall, Staff School Speech.
32. Ibid.
33. Ibid.
34. Ibid.
35. Baker, 20.
36. Ibid., 21.
37. Anecdote about Pearson's experience from Birchall, Staff School Speech.

Colonel E.S.C. Cable, OMM, CD (Retired)

Colonel Cable was born in Saskatoon, Saskatchewan. Upon completion of four years at Royal Roads Military College in Victoria, B.C. and the Royal Military College in Kingston, Ontario, he graduated with a Bachelor of Science degree in 1965. Colonel Cable received his navigator wings a year later at the Canadian Forces Air Navigation School in Winnipeg, Manitoba. Upon completion of his operational training at the 2 (Maritime) Operational Training Unit in Summerside, Prince Edward Island, Colonel Cable flew as an Argus navigator on 404 Maritime Patrol Squadron at 14 Wing Greenwood for four years and became the squadron's first Oceanography Officer. In 1970 he was transferred to 449 Maritime Patrol and Training Squadron where he was employed as a maritime patrol tactics and oceanography instructor.

In 1972, Colonel Cable graduated from the Aerospace Systems Course at the Canadian Forces School of Aerospace Studies in Winnipeg and was posted on exchange duties with the US Navy at the Naval Air Development Center (NADC) in Warminster, Pennsylvania. During his three year tenure at NADC, Colonel Cable was the P-3C (Orion) Update Aircraft Project Officer where he was responsible for the software design, flight testing and training the first US Navy squadron to convert to the P-3C Update aircraft. For his work at NADC, Colonel Cable was awarded the Secretary of the Navy Commendation.

Upon return to Canada in 1975, Colonel Cable attended the Canadian Forces Staff College in Toronto, Ontario; after which he was posted to the CP140 Aurora Program Office in Ottawa as the Operational Requirements Manager. Upon promotion to Lieutenant Colonel, Colonel Cable became the Aurora Program Office Director of Requirements.

In July 1980, Colonel Cable assumed command of 405 Maritime Patrol Squadron based at 14 Wing Greenwood, N.S. While under his command, 405 Squadron transitioned from the Argus aircraft to the new CP140 Aurora. During the first year of Aurora operations, the Squadron won the coveted Fincastle Trophy, emblematic of Anti-submarine Warfare supremacy among Commonwealth air forces.

Following his tour as Commanding Officer 405 Squadron, Colonel Cable became the 14 Wing Operations Officer at Greenwood where he was responsible for planning and coordinating all Aurora missions and conducting the post-flight analysis.

Upon promotion to Colonel, he was posted to CFB Trenton, Ontario where he assumed the duties of Deputy Chief of Staff Personnel and Administration at Canadian Forces Training System Headquarters. Colonel Cable was next posted to Maritime Command Headquarters, Halifax, N.S. as the Deputy Chief of Staff Operations. In August 1990, Colonel Cable became the Deputy Commander, Maritime Air Group. For his contribution, throughout his career, to the advancement of maritime air warfare; Colonel Cable was inducted into the Order of Military Merit (OMM) in 1994.

Colonel Cable retired from the Canadian Forces in September 1995; he and his wife, Carol, reside in Dartmouth N.S. Colonel Cable is on the Board of Directors for the Shearwater Aviation Museum as well serving as the museum's historian. He has a particular interest in the history of maritime aviation in Canada and serves as an Associate Air Force Historian for 1 Canadian Air Division Headquarters in Winnipeg Man. In addition to advising the Centre for Foreign Policy Studies at Dalhousie University on maritime security issues, Colonel Cable has had numerous articles on maritime affairs published by the Defence Association News Network; Defence Quarterly; the Dalhousie University Maritime Affairs Bulletin; Airforce, Wings and Canadian Helicopter magazines.

Chapter 3

Whatever Happened To? A Survey Of Selected Officers

Hugh Halliday

The Royal Canadian Air Force's (RCAF's) Air Force List of October 1939 named 61 officers of squadron leader rank in the General List. Nine had already passed Staff College examinations. Several in the group were First World War veterans, and it could be expected that their service careers would conclude with the end of hostilities. Indeed, a few would have been retired much earlier but for the outbreak of war.

An overview of these 61 may yield few general insights, but it does serve to illustrate how seniority, character, competency and opportunity affect both personal careers and the RCAF's command profile some 20 years after the publication of the October 1939 Air Force List.

One would anticipate that these squadron leaders—this pool of talent—would provide considerable leadership in the forthcoming war. Six years later, one had been killed in action while three had been killed in flying accidents. Three had died of natural causes. Three had been released relatively early in the war. One had transferred to the Royal Air Force (RAF). One was still a Squadron Leader.

Of this group, 45 had been commissioned in the RCAF following participation in the Provisional Pilot Officer (P/P/O) program, which dated from 1923, and had operated in the context of a small peace-time air force. The scheme had begun that year with nine cadets reporting to Camp Borden. One dropped out for medical reasons and only six returned for their second term. Four of these six qualified for their wings (December 1924). Of these, two were killed in flying accidents and one resigned his commission in 1927. That left only one of the original P/P/O—Charles Roy Slemon. By default, then, Slemon was the second most senior Regular Force squadron leader as of October 1939, and indeed had been promoted wing commander by the end of the month. The only Regular Force squadron leader with greater seniority (by 14 months) was Elmer Fullerton, a First World War veteran.[1]

The next P/P/O class after Slemon's began in 1924 with 25 cadets (eight of them from the Royal Military College [RMC]), while four other RMC cadets were directly commissioned in the RCAF and commenced pilot training. Of these 29 potential leaders, only six were still on the RCAF List as of 1939; of the balance, one had been killed in a flying training accident; the others had either failed to complete their training or had resigned their commissions.

Not surprisingly, in the small interwar air force, these men tended to move in bunches; thus, an Army Cooperation Course that began in September 1933 consisted of seven officers, all of whom were squadron leaders by October 1939. In the very small pool of post-war senior officers, the same close-knit career paths appear. In July 1951, for example, Air Vice-Marshal (A/V/M) C. R. Dunlap succeeds A/V/M Frank Miller as commandant of the National Defence College. Dunlap had earlier been Air Officer Commanding, Air Defence Command, and the post he was vacating would be filled by A/V/M A. L. James.

The pool of pre-war officers trained under the P/P/O scheme performed yeoman service in support of the civil power, in realms of photography, survey, customs-reconnaissance, and experimental flying. Yet in so far as "service" (i.e., military) operations were concerned, the RCAF had almost no practical experience. The methods of survey photography, suited to a peacetime air force, were useless in a wartime context. Army Cooperation training had amounted to preparations to refight the First World War; its tactics would be proven obsolete or worse in 1940 and a whole new tactical doctrine adopted. The RCAF had no practical training in either level bombing or aerial fighting. Its first exercises involving the mass movement of aircraft were conducted in June 1938, involving the transfer of No. 3 Squadron (Wapitis) from Ottawa to Calgary.

Indeed, it is sometimes surprising to note how little flying was done between the wars. It should be remembered that until about 1935 there was little flying done in winter. Routine night and instrument flying commenced only about 1930, led by American commercial air transport experience. William Riddell, for example, flew an average of 111 hours per year between 1926 and 1937, ranging from 34 hours in 1926 to 134 hours in 1927. In a three year period (1931-1933) Albert Carter flew an average of 120 hours each year. Ernie McNab flew 99 hours in 1929, 154 hours in 1930, then 254 hours in 1931 as

an acrobatic pilot on the Trans-Canada Air Pageant. In 1932 he was chiefly engaged in experimental air mail flying; that year he logged only 153 hours. The figure jumped to 175 hours in 1934 and 215 hours in 1935 (mainly on photographic flying).

Walter Whitson Brown had commenced flying training with the RCAF in September 1925; thereafter he had been an instructor, fire patrol pilot and photo survey pilot—yet as of August 1939 his logbook showed only 1,327 hours, or roughly 95 hours per year. Not only was his flying minimal, but it was almost exclusively on non-service types (training aircraft, photographic machines), which might (or might not) explain why he was retained in Canada commanding flying schools until almost the end of the war. When he did go overseas, it was to be a staff officer with No. 84 (Disarmament) Group.[2]

Much more industrious was Fowler Morgan Gobeil who, over 12 years, flew 2,462 hours or roughly 205 hours per year. Gobeil and Brown make interesting contrasts; Brown flew strictly "civil" type aircraft until 1939 (when he managed to log a few hours in a Hawker Hart), even his Army Cooperation training was in Moth and Courier machines. Gobeil managed a considerable amount of time on "service" aircraft, logging 91 hours on Atlas machines and an amazing 456 hours on Siskins.[3]

Frank Goodell Wait, who began his flying training in September 1924, had logged 1,093 hours by October 1939—an average of 73 hours per year.[4] Russell Charles Gordon had flown 2,150 hours between 1925 and 1939—an average of 140 hours per year.[5] Unlike Brown, both men managed to get considerable service flying on Atlas aircraft.

Relatively few of the 61 actually served in positions of operational command. The expansion of the RCAF meant that many were rapidly promoted to command schools or to staff the headquarters of both operational and non-operational formations. To this there were exceptions (H. M. Carscallen, for example).[6] More typical was Russell Charles Gordon, who in May 1939 returned from Britain to Canada after two years of exchange flying, most of it with Coastal Command. With his recent experience and rank of squadron leader, he served the first 18 months of the war in Eastern Air Command (EAC) [Nos. 5 and 10 Squadrons] before proceeding to other posts in Canada. He eventually went overseas in June 1943, this time to command a bomber base in No. 6 Group. Martin Costello spent the first half of the war on duty with EAC. When posted overseas in August 1943 his EAC experience was tapped for work in Coastal Command, including command of Station Castle Archdale when it was home to No. 422 and 423 Squadrons.

While some careers stalled at the group captain (G/C) level, three of the squadron leaders (Slemon, Campbell, and Dunlap) would eventually rise to become Chiefs of the Air Staff and one (Miller) would become the first Chief of the Defence Staff. It might be remarked that, along the way, Slemon had what was undoubtedly the briefest command of any officer. As of August 1945 he had been designated commander of the RCAF's component of "Tiger Force," which was to consist of Lancasters (and then Lincolns) operating in the Pacific theatre. Shortly after the bombings of Hiroshima and Nagasaki, he reported to Greenwood, thanked the men for having volunteered, and wished them well in peacetime, all in a single day.

Let us deal first with the 1939 squadron leaders who were veterans of the First World War. There were 17 of these. Seven of these had been members of the Regular Force; the other 10 were auxiliary Air Force personnel. The majority of them were given command of training bases or assigned to senior staff duties. Only two of these veterans had any significant overseas service. Of these, Geoffrey Stuart O'Brian commanded No. 3 Personnel Reception Centre in Bournemouth (1942-1943). Norman Sinclair MacGregor commanded non-operational bases in No. 6 Group including Wombleton.

The First World War veteran with the shortest RCAF career was Squadron Leader William Rogers, MC. He had been commissioned in the Reserve on 1 October 1938 specifically to organize No. 117 Auxiliary Squadron in Saint John, New Brunswick. This work had barely begun when war broke out. No. 117 was disbanded (it had never been issued aircraft) and Rogers was assigned to Eastern Air Command, forming the Aircraft Detection Corps. However, he was also the General Manager of SMT (Eastern) Ltd., the largest bus and trucking firm in the Maritimes, and the company was suffering in his absence. SMT had been designated as an "essential industry" and it was deemed that his services in that company were more important than what he might offer in the RCAF. Rogers was transferred to the Reserve of Officers on 23 March 1940, effectively ending his air force career.

The First World War veterans, denied overseas service, nevertheless performed singular duties at home. The service records of Squadron Leader (later Air Commodore) Roger Amedee Del'Haye, DFC

provide some curious insights. Between the wars he had been Secretary to the Regina Flying Club and the moving spirit behind formation of No. 120 (Bomber) Squadron when the RCAF Auxiliary was organized. In the late 1930s the RCAF repeatedly tried to retire him because of age; the Army Brigadiers in Military District No. l protested each time, declaring that Del'Haye was essential in promoting army-air cooperation. On the outbreak of war he took No. 120 Squadron to the West Coast, then took command of No. 5 Bombing and Gunnery School (Dafoe, Saskatchewan). In August 1942 he was appointed Air Officer Administration at No. 3 Training Command, Montreal where he was an efficient staff officer with special duties in Francophone recruiting. Nevertheless, age was his constant nemesis and the RCAF decided to retire him as of 1 December 1944. Ironically, two weeks before his retirement (18 November 1944) he was killed in the crash of a Harvard.

In the post-war era, the RCAF contemplated forming an Auxiliary Squadron in Regina. They gave up, concluding that the pre-war reserve unit there had existed essentially through the charisma, enthusiasm, and efficiency of Del'Haye; it could not be recreated without him.

At least two of the squadron leaders of October 1939 were genuine "characters," and both came to rather unfortunate ends. Frederick Joseph Mawdesley—the famous "Mawdie"—had been a First World War observer who earned his pilot's wings at Camp Borden in 1924. He was a slow learner, but once he had learned to fly he became one of the RCAF's most brilliant pilots; he was even nominated (unsuccessfully) for the McKee Trophy. On northern pioneering flights he seemed to have a compass in his head. He was utterly fearless. Unhappily, he loved flying so much that he resisted anything else, to the point that in 1931, Wing Commander G. O. Johnson described Mawdie's resistance to a desk job as "insubordination."

Mawdesley was many things—eccentric and brilliant, a prankster, a gambler, and a bachelor. He was, in short, a nail that stuck up—and as such he was hammered down. He rose to group captain, but was never posted outside of Canada. By all accounts, he was undervalued.

He had come near to being retired on account of age in 1938. His career from 1939 to 1945 was curious. Superiors seemed ready to praise him, but not too much. "Keenness might tend to influence his judgement at times," wrote Air Commodore A. H. Hull on December 14, 1942. Now there was an ambiguous assessment! A/V/M A. B. Shearer was more generous: "Wing Commander Mawdesley has given good and faithful service to the RCAF over a long period of years and is a well qualified and informed officer."

G/C Gordon McGregor was fulsome in his praise of Mawdesley, especially following a 1943 stint as acting commanding officer at Patricia Bay. Holding down a temporary post, Mawdie had been given no incentive to do anything but "hold the fort;" instead he had improved appearances, performances, and morale; he had even cleared up old problems that McGregor had never hoped to see resolved. Wherever he went, Mawdie was described as smart in appearance, excellent in management, and an officer who cared deeply about the welfare of his subordinates. If he was under a cloud, he did nothing to betray personal disappointment or bitterness.

It was as commanding officer of No. 5 Bombing and Gunnery School that he shone most brightly. Dafoe, Sask. was a harsh, isolated place by British Commonwealth Air Training Plan (BCATP) standards. Promoted to group captain (at last) and given charge of the school, he took a keen interest in the welfare of all, creating recreational and physical fitness facilities where none had existed. Morale soared; late in 1943 the unit was singled out as the best school in the BCATP.

Early in 1944, A/V/M T. A. Lawrence recommended Mawdesley for a CBE (Commander, Order of the British Empire); it did not reach the priority list for the Birthday Honours List. Late in August 1944, A/V/M Ken Guthrie put Mawdie up for an MBE (Member, Order of the British Empire); on September 8 this was changed to an AFC (Air Force Cross), which finally went through. It is possible —nay, probable—that Mawdesley's AFC was part recognition for services long past and part consolation prize.

He retired in 1945, but his reputation continued to obscure his talents. In the 1950s Squadron Leader Rick Mignon, then editor of *Roundel*, collected dozens of Mawdie stories which he intended to publish as a booklet. Unfortunately, Mawdesley saw the text and was offended to the point of being heartbroken; the man who loved a joke was either too prickly or too old to appreciate one on himself. The book was never published (the manuscript seems to have been lost or destroyed). To make amends, the RCAF named a training centre in Winnipeg "Mawdesley Hall." The old man came for the attendant

christening ceremonies, when tributes were paid and old times recalled, but the photographs show him smiling without much conviction. He was, in fact, very much alone. He had never married and he outlived whatever family he had known. When Mawdie passed away at Orange, New Jersey on May 13, 1968, he was solitary and penniless.[7]

The other "character" was Squadron Leader (later Wing Commander) William Irwin Riddell, also known as "Bull" Riddell. Trained as a pilot just at the end of the First World War, he joined the RCAF in 1925. His career blossomed in the late 1920s and early 1930s. He was a respected instructor, aerobatic pilot and commander of the Siskin Fighter Flight at Trenton (1931 to 1934). Most of his assessments were glowing. Nevertheless, from 1927 onwards his file is replete with correspondence in which he complains about his seniority, and from 1937 onwards he showed increasing stubbornness about what constituted his duties. Squadron Leader A. M. Hull twice paraded Riddell to remind him of his responsibilities. He was promoted to squadron leader in 1937 and to wing commander in May 1940. One junior officer later recalled Riddell as Commanding Officer at Rockcliffe—a brusque boss who placed far too many personnel on charge. A memo dated 9 January 1941 mentioned his "argumentative manner and his inability to co-operate with his seniors."[8] At least one report quickly contradicted another; on 17 December 1940, Group Captain F. V. Heakes wrote of him:

> Keen, energetic CO who takes interest in every phase Station activities; good perspective relative relations with HQS and subordinate commanders. Has paid particular attention to flying control organization, security, discipline, welfare of personnel and station development. Personal conduct entirely satisfactory.[9]

He was given command of a Bombing and Gunnery School in Manitoba, where he was quickly assessed as lacking tact and good judgement. When Riddell went on sick leave, authorities convened a medical board which concluded, in his absence, that he should be retired on medical grounds. He was immediately replaced in his command and formally retired five months later. Riddell did not go quietly. He protested his retirement for a year more. Air Force Headquarters (AFHQ) argued back that he had ulcers (which he denied); whether the ulcers aggravated his behaviour or vice versa is impossible to say.

Riddell's departure was also the subject of a near-comic incident. Just as he was leaving his Manitoba post, the Chief of the Air Staff (Air Marshal Lloyd Breadner) received a telegram signed by two junior officers:

> WING COMMANDER RIDDELL FINEST COMMANDING OFFICER IN THE AIR FORCE WOULD LIKE TO RETAIN HIM AS COMMANDING OFFICER OF NUMBER SEVEN BOMBING AND GUNNERY SCHOOL WE BELIEVE THIS IS BEST FOR ALL CONCERNED AS WING COMMANDER RIDDELL WOULD BE A GREAT LOSS TO THE AIR FORCE AT THIS TIME AND UNDER THE PRESENT CIRCUMSTANCES SPEAKING FOR ALL THE OFFICERS AND AIRMEN AT THE STATION I CAN FREELY SAY QUOTE WE WANT WING COMMANDER RIDDELL AS COMMANDING OFFICER HOPING YOU WILL DECIDE IN THE AFFIRMATIVE. (F/Os John L. Pinney and Edward Kirkby "and all").[10]

Senior officers advised the two young men (with less than six months of service) that such telegrams were highly irregular. Internally, it was stated: "This signal might appear to have emanated as the result of a farewell party and the possible over-consumption of alcohol thereat."

Several of the 1939 squadron leaders saw action overseas early in the war, before they were promoted to staff and senior command positions. Indeed, the first operational sortie flown by an RCAF was that by Squadron Leader William Isaac Clements. At the outbreak of war he was on exchange duties with the RAF, proceeded to France with No. 53 Squadron (Blenheims), and on the night of 29-30 September 1939 flew an uneventful night reconnaissance sortie over western Germany. Clements does not appear to have flown any further operational missions. He was shortly attached to RCAF Overseas Headquarters, then returned to Canada and a series of staff and Training Command appointments. He rose to group captain in the wartime RCAF and air commodore in peacetime, with posts such as Chief of Staff, No. l Air Division and Air Officer Commanding, Maritime Air Command.

Squadron Leader Wilbert Denison Van Vliet, newly promoted wing commander, proceeded overseas with No. 110 (Army Cooperation) Squadron in February 1940. The squadron would have been in the forefront of operations had the Germans landed in England. Flying Westland Lysanders, it would also probably have been wiped out within hours. The squadron (and Van Vliet) was spared

this. He was returned to Canada in October 1940 and assigned staff duties in AFHQ. He died of natural causes in October 1942.

Meanwhile, another RCAF squadron leader had, as of October 1939, assumed command of an RAF squadron newly formed in England. This was No. 242 Squadron, composed of Canadians who had previously enlisted in the RAF. Fowler Morgan Gobeil started out well—he persuaded Air Ministry to issue the unit with Hurricanes rather than Blenheims, worked it up to operational standard and led it in a competent manner in May 1940. Then, in the aftermath of Dunkirk, the British attempted to recreate a "Western Front" in France and committed several squadrons to the effort, including No. 242. The attempt was a disaster, but for No. 242 it was particularly chaotic. In the midst of a fighting retreat, the ground personnel decamped in the night. When No. 242 straggled back to Britain, Gobeil lost his command and was returned to Canada. He remained a squadron leader throughout the war, although he was awarded an AFC for his role as co-pilot in a glider that was towed with cargo across the Atlantic in a singularly futile experiment. Gobeil was finally promoted wing commander in 1948 and retired in 1956.

Just about the time that Gobeil was leaving Britain for Canada, another of the "Class of 1939" was arriving—Squadron Leader Ernest McNab. Like Gobeil, he was a veteran of the 1930s Siskin Acrobatic team. When the RCAF despatched No. l (Fighter) Squadron overseas in June 1940, McNab was the obvious choice to command it. He has previously served an exchange posting in Fighter Command and had even flown Hurricanes. His only competitor in Hurricane experience was Squadron Leader (later Group Captain) Elmer Fullerton, but Fullerton was a First World War veteran and probably not as fit as McNab, who was 34. McNab led No. l (Canadian) Squadron throughout the Battle of Britain, earning a DFC along the way. No. 1 (Canadian) began badly by shooting down two British bombers, but otherwise its Battle of Britain performance was competent (30 enemy aircraft claimed as destroyed for the loss of three pilots killed and ten wounded).

The McNab case is interesting, because although he attained the rank of group captain in 1942, he went no higher. His wartime services included Western Air Command postings (a dead end) and command of Station Digby overseas (which should have pushed him upwards). Yet there he stayed at group captain; he would retire in that rank in 1957.

Air Marshal G. O. Johnson, reviewing McNab's record in March 1945, suggested that he had been too much of an "operations man" for his own good. There was certainly nothing wrong with him from the working view:

> During G/C McNab's tour of duty as Station Commander at Digby, he was the recipient of very satisfactory reports, both as to his ability and efficiency, and, as well, was considered to be a reliable and tactful officer, particularly in his contacts with senior RAF officials and in his dealings and cooperation with the Army authorities.
>
> As a senior group captain, this officer has had little opportunity during his Service career for employment on staff duties, other than a short period at Western Air Command, first in his capacity of RCAF Liaison Officer with the USAAF [United States Army Air Force] Forces in Seattle, and later as ASO.l at the Command Headquarters.[11]

Johnson suggested more executive duties for McNab and a post "more commensurate with his present rank." He was thinking of McNab's career (but not necessarily of the service's best interests). Always an indifferent paper pusher, he was with an air force which would, after VJ [Victory over Japan] Day, become increasingly influenced by administrative rather than operational assessments.

One man recognized the inequity of the situation. On 28 January 1946, on the eve of his own retirement, A/V/M P. M. Heakes wrote a long assessment. Group Captain McNab, he felt, was getting a "bum rap." His reputation as a staff officer was poor; therefore, people judged him badly without looking at the record. Heakes described this as a "whispering campaign" fed by ignorance and jealousy. He pointed to McNab's achievements in getting No. l Squadron moved, trained, and organized for the Battle of Britain. He cited assessments of McNab while at Digby where he had been responsible for the administration, tactics and training of personnel who numbered as many as 3,600. He also pointed to McNab's own reluctance to defend himself against prejudiced rumours.

Unhappily, his reputation did not improve, and the evidence is that McNab himself gave ample proof that he had gone as far as he could expect. Through successive postings in Northwest Air

Command and elsewhere, he seemed unable to delegate work, then was swamped by the ensuing "paper blizzards." He was genial and popular, but even a sympathetic superior like A/V/M Ken Guthrie found himself embarrassed by backlogs attributable to his earnest subordinate.

In 1948-49 he attended the RCAF Staff College. The effect upon him was tremendous. Thereafter he was repeatedly commended for projects such as coordinating RCAF aspects of a 1951 Royal Visit and the 1953 National Air Show in Toronto. Nevertheless, he had slipped on the promotion ladder somewhere between 1943 and 1949, and no amount of "catch-up" on his part seemed enough to win him further promotion. To his credit, he expressed no bitterness (at least whilst in the service) at his stalled career.

As RCAF squadrons began to form overseas, another of the Class of 1939 was posted to Britain to assume command. Richard Gustav Briese, newly promoted to wing commander, was posted to No. 413 Squadron, a Catalina unit. His career was cut short when he was lost on a reconnaissance mission to Tromso, Northern Norway (22 October 1941). He was the only member of the Class of 1939 to be killed in action. Briese was followed in command of No. 413 by Wing Commander J. D. Twigg and then by another member of the Class of 1939, newly promoted Wing Commander John Plant. It was Plant's curse to lead No. 413 Squadron at a time when the Indian Ocean had become a backwater of the war. He returned to Britain in October 1942 and to Canada in late 1943, but he had no opportunity to shine on flying operations until June 1945, when he assumed command of No. 9 (Transport) Group, where his work was truly outstanding. I have alluded to Henry Myles Carscallen, a squadron leader in the Class of 1939 and later, as wing commander, the Commanding Officer of No. 424 Squadron (October 1942 to April 1943), the unit with which he was awarded a DFC. He rose to the wartime rank of group captain and ultimately retired as an air vice-marshal. One of the most curious incidents in his career actually occurred in October 1940, when he was commanding a detachment of Douglas Digby patrol bombers at St. John's, Newfoundland.

The incident involved the French island of St. Pierre. On 15 September 1940, two RCAF Digby aircraft undertook a reconnaissance of the harbour there. One stood offshore; the other, piloted by Carscallen, swooped low over the town to photograph the *Ville d'Ys* (warship). The crew of the vessel stripped an anti-aircraft gun for action, apparently ready to engage the Digby. Officially, St. Pierre was subject to Vichy France, but popular sentiment was Free French and Gaullist. A Sunday strolling crowd reacted violently, hurling insults and stones at the warship. In return, her officers turned a fire hose on the demonstrators. When this failed to disperse them, authorities threw a cordon of sailors with rifles and fixed bayonets around the quay. This was the first of many events which would widen the breach between a Free French public and a Vichy government.[12]

A brief overseas tour might suggest relatively little impact on operations, but the case of Walter Edwin Bennett suggests otherwise. Prior to the war he had taken an advanced RAF photography course. Most of his wartime service was in Western Air Command, but from February to September 1941 he was on duty in Britain. Records of this assignment are maddeningly sparse while suggesting important work. The file at the Directorate of History and Heritage (which is not his complete service file) included the following passage: "During a period of eight months in 1941 this officer completed 14 operational sorties over European targets. These particular sorties were flown in connection with the testing of special photographic equipment, the ultimate results of which were invaluable on photo reconnaissance ops in the later stages of the war." Clarence Rupert Dunlap had a very active operational career, first as officer commanding, No. 331 Wing (Wellington bombers, North Africa) and then commanding No. 139 Wing (Mitchells) in 2 Tactical Air Force. Dunlap flew 35 sorties with the Mitchell formation alone.[13]

The greater part of the Class of 1939, even when posted overseas, had to find such action where it could. Even staff officers ran risks—Hugh Campbell was injured by a land mine in North Africa. Those in command of No. 6 Group stations and bases, holding such ranks as group captain and air commodore, were expected to administer their stations, supervise training, assess their subordinates and not to get in the way by hitching rides on operational missions. The fact remains that many did hitchhike, although the records of their furtive operations are few. As a group captain in command of Station Tholthorpe, Russell Charles Gordon logged one mission (29 July 1943) to Hamburg. Sometimes a newspaper report would break the story that this or that group captain had recently taken part in a raid. When two base commanders (Hurley and Bryans) took part in a single raid (Le Mans, March 1944) there must have been a shudder at No. 6 Group Headquarters. Nevertheless,

it was hard to prevent officers from doing so; they had a natural desire to see action, coupled with a fear of being regarded by their men as "chair-bound." Besides, it was well known throughout No. 6 Group that the Air Officer Commanding (A/V/M C. M. "Black Mike" McEwen) was routinely flying on operations, contrary to orders.

Among the base and station commanders, two members of the Class of 1939 stand out for heroism "above and beyond." The first is well-known—the incident at Tholthorpe on 27-28 June 1944, when Air Commodore Arthur Ross became involved in the rescue of aircrew from a crashed and burning Halifax bomber. Ross was one of many participants in these events, but he assumed a leadership role when he could have stood back, and he lost a hand in the rescue attempt. He was awarded a George Cross, an honour granted to only four members of the RCAF—and he was the only one to survive his deed.

The other member of the Class of 1939 to stand out for great gallantry was Lawrence Edward "Larry" Wray. After numerous postings in Canada (during which he had risen to group captain), Wray arrived in Britain in November 1943 and assumed command of Station Skipton-on-Swale. He took his chances in "operational hitchhiking," and on the night of 18-19 March 1944, during a raid on Frankfurt, he was shot down. He arrived at Stalag Luft III shortly after the Great Escape, and became senior RCAF officer in the camp. Eventually, he became the Senior British Officer (SBO) there. As such, he had to fight for small concessions in food and creature comforts from German officers who were increasingly frightened of both their Schutzstaffel comrades and the Allies who were obviously winning. In January 1945 the enemy emptied several camps, including Stalag Luft III, and began marching the prisoners of war (POWs) westward, just ahead of the Russian army. It was in this atmosphere that Larry Wray assumed leadership with a capital "L." Official documents summarize his work. The best description, however, is that provided by a fellow POW, Squadron Leader B. J. Bourchier, and sent to AOC RCAF Overseas (Johnson):

> As a liberated prisoner of war, I would like the privilege of drawing to the attention of your Headquarters the excellent work done on behalf of myself and hundreds of other prisoners of war who, to a very large degree, owe their lives to the leadership of Group Captain L. E. Wray of the Royal Canadian Air Force.
>
> Until Group Captain Wray's arrival I was senior RCAF prisoner of war in Germany, and as there was no RCAF officer senior to Group Captain Wray, I feel it my duty to submit the following:
>
> When Group Captain Wray arrived in Stalag Luft III, he was immediately accepted as "one of the boys," due to his outstanding personality and leadership, and was given the title of "Canada's Ambassador to Allied Kriegydom" (P.O.W. dom).
>
> He became Senior Administrative Officer [SAO] and his arrival relieved Group Captain Wilson, the SBO, of many of the administrative details. His work in this capacity was a full time job and he was able to make many changes which resulted in our POW life becoming much more endurable. Every hour of every day he had something planned to keep us occupied whether it was sports, entertainment or education. Further, no matter what hour of the day or night a POW needed attention or advice, Group Captain Wray was always available with the necessary works of cheer and hope. He exercised the finest influence on morale in Stalag Luft III.
>
> It was not until the camp was ordered to march from Sagan to the Bremen area in the latter part of January that his outstanding ability was given full scope. Had the march been carried out at the pace set by the Germans, countless POWs would have dropped out due to exhaustion and fatigue and been left behind at the mercy, if any, of the Germans.
>
> Conditions on our arrival at the camp in the Bremen area were far from satisfactory, and again Group Captain Wray, as SAO, worked night and day and was able to organize the camp and the Germans to such an extent that life was not too bad.
>
> Again, on the march from the Bremen area towards Lubeck, Group Captain Wray, who was now the Senior British Officer, continually countermanded the orders of the German Commandant in order to slow down the march so that those who were in a poor physical condition could keep pace. In doing this Group Captain Wray was continually running the risk of being turned over by the Commandant to the Gestapo or SS, but regardless of this he so successfully slowed down the march and spread out the column that very few POWs had to be left behind. Also, the long straggling column did its bit in tying up the German road traffic.

> On the arrival of the POWs in the Lubeck area, Group Captain Wray had them billeted at farms outside the city while he went on ahead to inspect the proposed camp. Because it was too small and totally unsuitable, he would not allow the column to continue to Lubeck, and was able to have us march back to a big farm estate where the POWs were billeted in barns, cowsheds, etc., in comparative luxury to the proposed camp at Lubeck. In making these arrangements, Group Captain Wray had to do considerable traveling, and several times was shot up by our Tactical Air Forces. He also entered the town of Bad Odersloe 24 hours after a daylight RAF raid. Particularly in this town did he run the risk of being mobbed by the remaining angry population.
>
> These few brief instances will serve to indicate how Group Captain Wray risked his life continually in order that the POWs might receive better treatment from the Germans. It is my firm conviction that most of the POWs who got back owe their lives to Group Captain Wray. Many more specific instances could be given. Every POW on the march will verify that Group Captain Wray was in continual danger of reprisal by the Gestapo for his delaying action and his absolute indifference to orders or instructions issued by our captors. Everything he did was with the sole object of saving the lives of Allied POWs. His success can be judged by the numbers of POWs who returned safely. This report is made in the earnest hope that it can be passed on to the highest authority in order that some proper recognition can be given to a gallant leader and a brave officer.[14]

Larry Wray was awarded an OBE [Order of the British Empire] (his RCAF superiors lobbied unsuccessfully for a DSO [Distinguished Service Order]). He rose to air vice-marshal; along the way he commanded No. 9 (Transport) Group, Air Defence Command and No. 1 Air Division in Europe.

Not all careers were as colourful as those of McNab or Wray, but most of the Class of 1939 had significant achievements at some point. Arthur Haliburton Wilson is not a familiar name in RCAF history; before the war he was primarily known as a commercial pilot and instructor, first with the Aero Club of British Columbia and then with No. lll (Auxiliary) Squadron. His wartime assignments kept him in Canada as a station commander and Service Flight Training School commander. Nevertheless, having taken retirement in July 1944, he went on to work with the Department of Transport principally as Regional Superintendent of Airways in British Columbia. He retired from aviation in 1965 and in 1978 was inducted into the Canadian Aviation Hall of Fame.

Overall, it is difficult to generalize about the Class of 1939. Some were brilliant (or had the chance to demonstrate their talents); some were drones (or had no chance to shine). A few, like Elmer Fullerton (winner of the 1935 McKee Trophy), had achieved their greatest moments before the war, although a lasting contribution was also his design of the Air Force Tartan.[15] At least one (John George Bryans) became something of a prophet in his post-RCAF life. Even Fowler Gobeil—the black sheep of the class, went on to become a university fund-raiser and, when he died, dictated that his body be given over to a medical school.

Quite a class!

RCAF Officers, Squadron Leader Rank, October 1939

* denotes First World War service
Reserve or Auxiliary Officers in Bold

*ADAMS, Albert Oliver – seniority from 1 April 1938 – Wartime awards: OBE; attained wartime rank of group captain – retired in that rank, May 1953.

ASHTON, Arthur James – seniority from 18 March 1938. Retired as air commodore, May 1945.

BENNETT, Walter Edwin – seniority from 1 April 1939. Wartime awards: mention in Despatches, Legion of Honour. Attained wartime rank of group captain; retired as air commodore, July 1961.

ELAINE, Donald Smith – seniority from 1 April 1939. Attained wartime rank of group captain. Retired as air commodore, 1956.

BRIESE, Richard Gustav – seniority from 1 April 1939. Attained wartime rank of wing commander. Killed in action with No. 413 Squadron, 22 October 1941.

BROWN, Walter Whitson – seniority from 1 April 1938 – Wartime award: Legion of Honour. Attained wartime rank of air commodore; retired in that rank, 1955.

BRYANS, John George – seniority from 1 April 1939 – Wartime awards: OBE, CBE; Mention in Despatches – Retired as air vice-marshal, 1961.

CAMERON, Robert Alexander – seniority from 1 April 1939. Attained wartime rank of group captain; retired as air vice-marshal, 1966. He appears to have spent almost his entire career in AFHQ as an armament specialist with brief forays overseas and to RCAF Station Mountain View, Ontario; no wartime awards and not even press releases on his file.

CAMPBELL, Archibald Patrick – seniority from 1 April 1937 – Wartime awards: CBE, Mention in Despatches. Transferred to RAF as group captain, May 1944.

CAMPBELL, Hugh Lester – seniority from 1 April 1939 – Wartime awards: CBE, Czech War Cross, Czech Order of the White Lion, Legion of Merit. Attained wartime rank of air vice-marshal. Retired as Air Marshal, 1962.

CAREFOOT, Herbert Reginald – seniority from 1 April 1939. Attained rank of group captain, 1 March 1942. Killed in crash of Ferry Command Liberator, 25 April 1942.

CARR-HARRIS, Brian Gethyn – seniority from 1 April 1937. Attained rank of wing commander. Killed in flying accident, Lac St. Louis, Quebec, 6 July 1942.

CARSCALLEN, Henry Myles (CHS) – seniority from 1 April 1939 – attained wartime rank of group captain – Wartime awards: DFC, Mention in Despatches. Retired with rank of air vice-marshal, 1963.

*CARTER, Albert, MM – seniority from 1 January 1939. Attained rank of wing commander, retired in that rank, 6 August 1943.

CLEMENTS, William Isaac – seniority from 1 April 1939. Wartime awards: OBE, Croix de Guerre. Attained wartime rank of group captain. Retired as air commodore, 1963.

COLEMAN, Sheldon William – seniority from 1 April 1939 – Wartime award: Legion of Merit (Officer). Retired in rank of air commodore, June 1959.

COSTELLO, Martin – seniority from 1 April 1938 – Wartime awards: OBE, CBE, Mention in Despatches. Attained wartime rank of air commodore - retired in that rank, 9 March 1959.

***CREIGHTON, Gerald Esmond – seniority from 1 May 1939 to command No. 116 (F) Squadron. Attained wartime rank of wing commander; retired July 1943.**

***DEL'HAYE, Roger Amedee, DFC – seniority from 1 January 1936 – rose to air commodore; killed in a Harvard on 18 November 1944.**

***DUBUC, Marcel – seniority from 1 September 1934 – seniority from 1 September 1934 – retired as group captain, November 1944.**

DUNLAP, Clarence Rupert – seniority from 1 April 1939. Wartime awards : CBE, Silver Star, Croix de Guerre. Attained wartime rank of air commodore. Retired as air marshal, 1968.

EDWARDS, Douglas Muir – seniority from 1 April 1939. Wartime awards: AFC, Mention in Despatches, Croix de Guerre, Legion of Honour, American Air Medal. Attained wartime rank of group captain; retired in that rank, 1951.

***FOSS, Roy Holmes – seniority from 28 September 1938. Attained rank of group captain and retired in that rank, September 1945.**

*FULLERTON, Elmer Garfield – seniority from 1 April 1935 – Wartime awards: AFC – retired as group captain, 1946.

GOBEIL, Fowler Morgan - seniority from 1 April 1939. Wartime awards, AFC. Promoted to wing commander, 1 January 1948; retired 1 April 1956.

GODWIN, Harold Brandon – seniority from 1 April 1938. Wartime awards: OBE, CBE – Attained wartime rank of air commodore. Retired as air vice-marshal, April 1959.

GORDON, Russell Charles – seniority from 1 April 1939. Wartime awards: CBE, Mention in Despatches, Legion of Merit – attained wartime rank of air commodore; retired in that rank, 1953.

*HARDING, David Allen, AFC – seniority from 1 April 1937 – Wartime awards: OBE – retired as group captain, February 1946.

HAWTREY, Ralph Courtney – seniority from 1 April 1939. Attained rank of group captain, March 1942. Retired in that rank, March 1959.

HURLEY, Joseph Louis - seniority from 1 April 1939. Wartime awards: CBE, Mention in Despatches. Attained wartime rank of group captain. Retired as air commodore, 1955.

JAMES, Arthur Lome – seniority from 1 April 1938 – Wartime awards: CBE, Legion of Merit (Commander). Attained wartime rank of air vice-marshal; retired in that rank, April 1955.

JOHNSON, Bertram Frederick – seniority from 1 April 1937 – Wartime awards: OBE, Mention in Despatches – retired as air commodore, July 1946.

JONES, Wilfred Alexander – seniority from 1 April 1939 – Wartime awards: Mention in Despatches. Attained wartime rank of group captain. Died of natural causes in England, 2 May 1944.

KERR, John Gordon – seniority from 1 April 1939 – Wartime awards: CBE, AFC, Mention in Despatches. Attained wartime rank of air commodore. Retired as air vice-marshal, 1963.

LEWIS, Alexander – seniority from 1 April 1938 – Wartime awards, AFC. Attained rank of group captain in 1941; retired in that rank, 1949.

LITTLE, Robert Hazen – seniority from 1 October 1939 – Auxiliary officer; attained wartime rank of wing commander; retired August 1944.

MacCAUL, Donald Harvey – seniority from 1 April 1938 – Wartime award: Mention in Despatches – Attained wartime rank of group captain; retired in that rank, circa 1955.

***MacGREGOR, Norman Sinclair, DFC – seniority from 1 October 1938 – Wartime awards: Mention in Despatches. Attained rank of group captain; retired in that rank, April 1945.**

MAIR, Robert Comrie – seniority from 1 April 1939. Attained wartime rank of group captain, but reverted to wing commander, 1 October 1946 and retired in that rank, 1957.

*MAWDESLEY, Frederick Joseph – seniority from 8 September 1936 – Wartime awards, AFC – retired as group captain, 1945.

McBURNEY, Ralph Edward – seniority from 1 April 1938 – Wartime awards: CBE, Mention in Despatches - retired as air vice-marshal, 1952.

McGOWAN, Edwin Archibald – seniority from 1 April 1938 – Wartime awards: Mention in Despatches. Attained wartime rank of group captain; retired in that rank, July 1948.

McNAB, Ernest Archibald – seniority from 1 April 1939 – Wartime awards: OBE, DFC, Czech War Cross – attained rank of group captain, June 1942; retired in that rank, 1957.

*MIDDLETON, Elwood Edward – seniority from 1 April 1937 – Wartime awards: CBE. Attained wartime rank of air commodore. Retired as air vice-marshal, 1949.

MILLER, Frank Robert – seniority from 1 April 1939. Wartime awards: CBE, Mention in Despatches. Attained wartime rank of air commodore. Retired as Air Chief Marshal, July 1966.

***O'BRIAN, Geoffrey Stewart, AFC – seniority from 8 October 1932. Wartime awards: CBE – retired as air commodore, 15 November 1944.**

ORR, Walter Alyn – seniority from 1 April 1939. Wartime awards: OBE, CBE, Mention in Despatches. Attained wartime rank of air commodore. Retired as air vice-marshal, 1962.

PLANT, John Lawrence – seniority from 1 April 1939. Wartime awards: CBE, AFC, Mention in Despatches. Attained wartime rank of air commodore. Retired as air vice-marshal, 1956.

***RAYMOND, Adelard – seniority from 1 September 1939. Auxiliary officer. Wartime awards: CBE, Legion of Honour, Croix de Guerre. Attained wartime rank of air vice-marshal; retired May 1945.**

*RIDDELL, William Irwin – seniority from 1 April 1937. Promoted to wing commander; retired to pension, 25 May 1942.

***ROGERS, William Wendell, MC – seniority from 1 October 1938. Transferred to Reserve, 23 March 1940.**

ROSS, Arthur Dwight – seniority from 1 April 1938 – Wartime awards, GC, OBE, CBE, Mention in Despatches. Attained wartime rank of air commodore. Retired in that rank, February 1961.

***RUSSELL, Arthur Herbert Keith – seniority from 1 October 1938 – Wartime awards, CBE. Attained rank of group captain; retired in that rank, February 1945.**

SAMPSON, Frank Augustus – seniority from 1 April 1938 – Wartime awards: OBE, Mention in Despatches, Legion of Merit (Legionnaire), Croix de Guerre. Attained wartime rank of group captain; retired in that rank, November 1955.

SLEMON, Charles Roy – seniority from 1 July 1936. Wartime awards: CB, CBE, three times Mention in Despatches, Legion of Merit (US, Degree of Officer), Croix de Guerre, Legion of Honour. Attained wartime rank of air vice-marshal; retired as Air Marshal, 1965.

TRECARTEN, Clive Leonard – seniority from 1 April 1939. Wartime awards: OBE. Attained wartime rank of group captain; retired in that rank, December 1954.

VAN VLIET, Wilbert Denison – seniority from 1 April 1938. Attained rank of group captain. Died of natural causes, 25 October 1942.

WAIT, Frank Goodell – seniority from 1 April 1937 – Wartime awards: CBE, Mention in Despatches. Attained wartime rank of air commodore; retired as air vice-marshal, 1955.

WALKER, Cecil Charles – seniority from 1 April 1937 – Rose to group captain; died of natural causes, May 1941.

***WILSON, Arthur Haliburton – seniority from 16 June 1937. Retired as group captain, July 1944.**

WRAY, Lawrence Edward – seniority from 1 April 1939. Wartime awards: AFC, CBE, Czech War Cross, Croix de Guerre. Attained wartime rank of group captain. Retired as air vice-marshal, 1964.

Squadron Leader Seniority List, October 1939

***O'BRIAN, Geoffrey Stewart, AFC – seniority from 5 October 1932**

***DUBUC, Marcel – seniority from 1 September 1934.**

*FULLERTON, Elmer Garfield – seniority from 1 April 1935.

***DEL'HAYE, Roger Amedee, DFC – seniority from 1 January 1936.**

SLEMON, Charles Roy – seniority from 1 July 1936.

*MAWDESLEY, Frederick Joseph – seniority from 8 September 1936.

*HARDING, David Allen, AFC – seniority from 1 April 1937.

WALKER, Cecil Charles – seniority from 1 April 1937.

WAIT, Frank Goodell – seniority from 1 April 1937.

CAMPBELL, Archibald Patrick – seniority from 1 April 1937.

CARR-HARRIS, Brian Gethyn – seniority from 1 April 1937.

JOFINSON, Bertram Frederick – seniority from 1 April 1937.

*MIDDLETON, Elwood Edward – seniority from 1 April 1937.

*RIDDELL, William Irwin – seniority from 1 April 1937.

***WILSON, Arthur Haliburton – seniority from 16 June 1937.**

ASHTON, Arthur James – seniority from 18 March 1938.

BROWN, Walter Whitson – seniority from 1 April 1938.

MacCAUL, Donald Harvey – seniority from 1 April 1938.

McBURNEY, Ralph Edward – seniority from 1 April 1938.

VAN VLIET, Wilbert Denison – seniority from 1 April 1938.

LEWIS, Alexander – seniority from 1 April 1938.

*ADAMS, Albert Oliver – seniority from 1 April 1938.

JAMES, Arthur Lome – seniority from 1 April 1938.

SAMPSON, Frank Augustus – seniority from 1 April 1938.

COSTELLO, Martin – seniority from 1 April 1938.
McGOWAN, Edwin Archibald – seniority from 1 April 1938.
ROSS, Arthur Dwight – seniority from 1 April 1938.
GODWIN, Harold Brandon – seniority from 1 April 1938.
***FOSS, Roy Holmes – seniority from 28 September 1938.**
***ROGERS, William Wendell, MC – seniority from 1 October 1938.**
***RUSSELL, Arthur Herbert Keith – seniority from 1 October 1938.**
***MacGREGOR, Norman Sinclair, DFC – seniority from 1 October 1938.**
*CARTER, Albert, MM – seniority from 1 January 1939.
TRECARTEN, Clive Leonard – seniority from 1 April 1939.
HAWTREY, Ralph Courtney – seniority from 1 April 1939.
GOBEIL, Fowler Morgan – seniority from 1 April 1939.
DUNLAP, Clarence Rupert – seniority from 1 April 1939.
CAREFOOT, Herbert Reginald – seniority from 1 April 1939.
BRYANS, John George – seniority from 1 April 1939.
COLEMAN, Sheldon William – seniority from 1 April 1939.
McNAB, Ernest Archibald – seniority from 1 April 1939.
GORDON, Russell Charles – seniority from 1 April 1939.
JONES, Wilfred Alexander – seniority from 1 April 1939.
EDWARDS, Douglas Muir – seniority from 1 April 1939.
WRAY, Lawrence Edward – seniority from 1 April 1939.
HURLEY, Joseph Louis – seniority from 1 April 1939.
CAMPBELL, Hugh Lester – seniority from 1 April 1939.
KERR, John Gordon – seniority from 1 April 1939.
PLANT, John Lawrence – seniority from 1 April 1939.
BENNETT, Walter Edwin – seniority from 1 April 1939.
CAMERON, Robert Alexander – seniority from 1 April 1939.
CLEMENTS, William Isaac – seniority from 1 April 1939.
MILLER, Frank Robert – seniority from 1 April 1939.
ORR, Walter Alyn – seniority from 1 April 1939.
BLAINE, Donald Smith – seniority from 1 April 1939.
CARSCALLEN, Henry Myles (CHS) – seniority from 1 April 1939.
BRIESE, Richard Gustav – seniority from 1 April 1939.
MAIR, Robert Comrie – seniority from 1 April 1939.
***CREIGHTON, Gerald Esmond – seniority from 1 May 1939.**
LITTLE, Robert Hazen – seniority from 1 October 1939.
***RAYMOND, Adelard – seniority from 1 September 1939**

Notes

1. See Sandy Babcock, "Air Marshal Roy Slemon: the RCAF's Original," in *Warrior Chiefs*, edited by Lieutenant-Colonel Bernd Horn and Stephen Harris (Toronto, Dundurn Press, 2001).
2. W. W. Brown's papers, including his logbooks, are held by the Canadian War Museum (Accession 19870285).
3. F. M. Gobeil's logbooks are held by the Canadian War Museum (Accession 19950114), but their value is reduced because those for 1928 to 1938 were destroyed; only annual summaries of his flying were retained.
4. F. G. Wait logbooks, Canadian War Museum (Accession 19790310).
5. R. C. Gordon logbooks, Canadian War Museum (Accession 19800659).
6. See "H. M. Carscallen: A Pioneer Airman," in *Airforce*, Volume 17, No. 2 (July 1993).

7. Mawdesley has been often mentioned and never analysed; see articles in *Journal of the Canadian Aviation Historical Society*, Vol. IV, No. 4, Vol. VIII, No. 3, Vol. XII, No. 4 and Vol. XXXII, No. 2 (Summer 1995); Max Hendrick, "What's a Pre-War Story Without Mawdesley?" *Airforce*, Vol. IX, No. 2 (July-August-September 1985); Leslie Roberts, *There Shall Be Wings,*102-105 and 108; W. A. B. Douglas, *The Creation of a National Air Force,*113-115; Larry Milberry, *Aviation in Canada,*192. The recommendation for the McKee Trophy can be found in Vol. 2 of RCAF file 821-4, "Trophies for Individuals - McKee Trans-Canada Trophy," in National Archives of Canada, Record Group 24, Vol. 17795.

8. Library and Archives Canada, memorandum dated 9 January 1941 in the RCAF Record of Service for Squadron Leader (later Wing Commander) William Irwin Riddell. Subsequent references quoted as "Riddell Service Record."

9. Riddell Service Record, report written by Group Commander F. V. Heakes, dated 17 December 1940.

10. Riddell Service Record.

11. Library and Archives Canada, taken from the RCAF Record of Service for Squadron Leader Ernest McNab, a review written by Air Marshal G. O. Johnson in March 1945.

12. Douglas Anglin, *The St. Pierre and Miquelon Affaire of 1941: A Study in Diplomacy in the North Atlantic Quadrangle* (University of Toronto Press, 1966); reprinted 1999 as Free French Invasion: *The St. Pierre and Miquelon Affaire of 1941* (Calgary, Penny Black Publishing), 20-22.

13. Dunlap wrote an article, "Memories of 139 Wing," *High Flight* (Vol. II, No. 5, September-October 1982), which described the tactics and objectives of the Wing and said almost nothing about his own personal contributions.

14. National Archives of Great Britain, file reference AIE 2/9104.

15. See Alice Gibson Sutherland, *Canada's Aviation Pioneers: 50 Years of McKee Trophy Winners* (McGraw-Hill Ryerson, Toronto, 1978); H. G. Williamson, "How it All Began," in *Airforce*, December 1980.

Hugh Halliday

Hugh A. Halliday (1940 -) was born and educated in Manitoba. He holds a BA from the University of Manitoba (1961) and an MA from Carleton University (1965). In 1961 he joined the Royal Canadian Air Force and was employed as a staff officer in the Air Historian Section and subsequently in the integrated Directorate of History, Department of National Defence. In 1968 he left the Forces to teach at the Niagara College of Applied Arts and Technology in Welland, Ontario. He joined the staff of the Canadian War Museum in 1974 and served in several appointments including that of Curator of War Art (1976-1985). He retired from the museum in 1995.

He is the author or compiler of several studies related to Royal Canadian Air Force history and Canadian airmen bearing the following titles: Chronology of Canadian Military Aviation *(1975),* The Tumbling Sky *(1978),* 242 Squadron: The Canadian Years *(1981),* Woody: A Fighter Pilot's Album *(1987) and* Typhoon and Tempest: The Canadian Story *(1992). With Larry Milberry he co-wrote* The Royal Canadian Air Force at War, 1939-1945 *(1990), and with Brereton Greenhaus he wrote* Canada's Air Forces *(1999). He is also the author of numerous articles on military subjects, Canadian war art and shipwrecks. His books* The Wreck of the Lady of the Lake and Other Stories From the Age of Sail *was self-published in 1974. More recently,* Wreck ! *(1997) deals with Canada's worst railway accidents.* Murder Among Gentlemen *(1999) covers the history of duelling in Canada.* Not in the Face of the Enemy: Canadians Awarded the Air Force Cross and Air Force Medal, 1918-1966 *(2000) deals with a variety of feats rewarded with these two decorations. Another work,* Valour Reconsidered: Studies of the Victoria Cross and Other Awards for Bravery (2006)*, dealt with questions as to how major gallantry awards are bestowed.*

Chapter 4

Beyond the Emergency: Professionalism, Leadership and Expression of Disobedience in Canada's Air Forces, 1919-1946

Rachel Lea Heide

Disobedience in Canada's Air Forces

Although a legacy of mutiny by large collectivities does not exist in Canada's Air Force, Canadian airmen have resorted to industrial action types of protest on occasion. Men in the Canadian Air Force refused to parade and work in January 1919. Ground crews at two stations held sit-down strikes in February 1946. In both instances, the airmen were not revolting against their superior officers; instead, they were making political statements and prodding the government to fulfill its obligations in regards to promised pay (in 1919) and timely repatriation (in 1946).

In some ways, there are striking differences between the mutinies in Canada's Air Forces and the mutinies in Canada's Army and Navy. Army and naval demonstrations have always been about restoring or improving acceptable living conditions and challenging officers in command who cared little about their men's welfare and even less about effective communications. In the Air Force experience, effecting change in leadership or living conditions have not been the goals; securing repatriation has been the main focus, and the airmen knew that this had to be taken up with political, not military, leaders. Nevertheless, despite the different grievances amongst the services, there is one important similarity: men from all three services have felt justified in their disobedience because they were upholding a moral economy amongst their class. Their logic is that leaders must be held accountable when it is felt that they are failing to uphold their obligations and when they transgress what their charges deem to be fair and reasonable treatment in return for faithful military service. The Air Force mutinies of 1919 and 1946 clearly fit into a tradition of defending a moral economy, but the leaders that the airmen had to confront—especially in 1946—were not superior officers but rather the civilian government. The study of past mutinies can underline lessons about deficient leadership, desirable leadership qualities, subordinates' expectations and realistic policies.

Mutinies in the Canadian Air Force, January 1919

Until the creation of the Canadian Air Force (CAF) in 1918, Canadians served in Great Britain's Royal Flying Corps, Royal Naval Air Service and Royal Air Force. Refusal to obey orders was not a tradition for Canadian airmen during the war—their conditions of living were infinitely better than life in the trenches. Nevertheless, once the war was over, some of those awaiting demobilization in the CAF became less tolerant and more vocal about self-interests. The emergency was over, and Canadian airmen at the Halton Camp and the Heyford Detachment in Great Britian wanted better treatment, better conditions, answers about peacetime pay and assurances about demobilization.

On Friday 3 January 1919, a detail of Canadians attending a trades course at Halton Camp refused to parade. Inquiries the next day revealed that the Imperial officer who took a parade on 3 January had shown a severe lack of tack. Despite the fact that the parade ground "was in a deplorable condition," the officer "began to drill the men before a crowd of young soldiers who obviously took much pleasure in seeing the detail drilling in the mud." In response to this lack of respect and callous amusement of officer and young soldiers alike, the Canadians refused to parade again as a means of protesting their senseless humiliation. The investigating officer recommended having "a reliable officer sent to Halton Camp immediately to take charge of the Canadian details there." With that, he considered the incident closed as he reported to the headquarters of Overseas Military Forces of Canada (OMFC) in London: "the men are working quietly and well at the shops."[1]

The OMFC Headquarters in London sent a Captain Ryan to oversee the Canadians at Halton Camp and to replace the previous lax officer who let the trouble brew. On 23 January 1919, Ryan reported to headquarters "that conditions seem much more satisfactory." He did feel, though, that instructors for courses of acetylene welders, blacksmiths, electricians and engine fitters should be replaced. The Royal Air Force (RAF) instructors were disinterested in their work, and Ryan suspected "this lack of interest [to be] due to the desire for demobilization on their part."[2] Poor leadership and transgressing the airmen's sense of self-respect lead to the defence of their moral economy at Halton Camp.

The Halton Camp incident was not the only protest with which Canadian authorities had to deal. On 7 January 1919, another demonstration occurred, this time at Upper Heyford, and this time, there was a lengthy list of grievances and demands. At 0840 hours, "the other ranks paraded as usual by flights under their NCOs [non-commissioned officers] and the squadron under the Regimental Sergeant-Major. On being given the command to move off to their respective flights to carry on, they refused to move. The NCOs, with exception of the flight sergeants, took the same attitude as the men." When confronted by the squadron's Commanding Officer, Captain A. E. McKeever, the men refused to carry out technical duties with the squadron until they were guaranteed working pay. The men at Upper Heyford stated very plainly that if the promised working pay was not given to them immediately, they would refuse to perform technical duties for the CAF, and they would request to be returned to their army units. Both the men and the NCOs also wanted to know how long they would be prevented from returning to civilian life.[3]

Captain McKeever reported the situation to be greatly improved just five days later. Pay and demobilization policy may have been the complaints voiced to justify the refusal to work, but later investigation clearly demonstrated that morale had been low for some time because of poor living conditions. The men had been moved to better accommodations that, according to McKeever, "are as comfortable as one could hope to find any place." This move was necessary seeing as "the quarters which the men were in at the time of my last memorandum have been condemned by the Medical Officer owing to the material on the roof not remaining waterproof after the heavy fall of snow which we had about a fortnight ago." The squadron's commander also put some effort into improving the condition of the men's messing. Consequently, he reported that "the situation with regard to other ranks is greatly improved since my last memorandum.... The work seems to be going along with more vim than it has for some weeks previous to the outbreak."[4]

Despite McKeever's positive update, Major C. M. Marshall's report to the OMFC General Staff on 28 January 1919 was anything but glowing. When he visited Upper Heyford on 23 January, he "found the general bearing and discipline of the men ... anything but good - their being discontented and slovenly, this being due, in my opinion, to their not being properly commanded and looked after." Marshall also felt that the men needed more training. Hence, Marshall recommended bringing a drill sergeant-major to be in charge of training. McKeever "heartily endorsed" the suggested changes and improvements.[5]

Nevertheless, Marshall's report to OMFC Headquarters at the end of February was another harsh condemnation of Heyford's leadership. Marshall wrote, "on taking over the Heyford detachment on 5-2-19, I found the men generally dissatisfied and slovenly." Marshall made changes to the station's messing, sanitation, discipline and training. After making revisions to living conditions and increasing the emphasis on discipline, Marshall was able to write to OMFC Headquarters, "I have much pleasure in informing you that the men now appear quite satisfied, and crime has decreased by quite 75 percent."[6] The passing of another couple of weeks saw continued improvement in the men's morale. Marshall was not completely satisfied with the state of discipline amongst the Canadians, but he did feel that improvement was steady, and he could not help but note that "the men seem much more cheerful and contented and appreciate that their comfort and interests are receiving attention."[7]

This is all that the men at Halton Camp and Upper Heyford wanted—to have their plight taken into consideration. Now that the war was over, the sense of urgency and the willingness to patriotically bear hardships had dissipated. These uniformed men wanted to return to their civilian status. The airmen of Halton Camp wanted some respect shown them and freedom from unnecessary abuse. Their protest was clearly calling for better leadership, and investigators easily saw that the proper solution was appointing a Canadian officer to supervise the Canadian airmen: this fellow countryman and comrade in arms understood the implicit social contract between officers and men better than the Imperial officer who humiliated the Canadians publicly in the mud. The problems at Upper Heyford were also rooted in poor leadership and failure to pay attention to the airmen's general welfare, but it is unclear from the primary records if the airmen themselves realized this. The complaints they raised were about policy—they were not receiving the pay they had been promised on transfer to the embryonic Canadian Air Force, and they were concerned that their decision to be a part of the new Air Force might result in their having to remain in the military six months longer than their comrades in the Army. Neither of those two concerns could be rectified by their immediate superior officers; these issues had to be dealt with by the policy makers in the military and the government. Although not articulated by the men of Upper Heyford, low morale, questionable living conditions and poor leadership also played a role in the airmen's

deportment. Once the discontent was brought to Captain McKeever's attention, he made honest efforts to improve the men's messing conditions and accommodations. Marshall made further changes to living conditions, created a varied recreational programme and instituted discipline training to counter the men's dissatisfaction and slovenly deportment.[8] There were no further reports of mass protest while the men awaited demobilization, so it can be seen that attentive leadership and bearable amenities staved off further transgressions.

Mutinies in the Royal Canadian Air Force, February 1946

As in the First World War, Canadians fighting in the Allied air war between 1939 and 1945 carried off their duties with distinction and determination. Although the Canadian Navy suffered a number of industrial action protests over living conditions and unacceptable leaders, such occurrences did not take place in the Royal Canadian Air Force (RCAF) during hostilities. Even once the war had ended and men were kept overseas for occupation duties, RCAF personnel did not feel the need to rise-up and try to effect change in their superior officers nor in their living conditions. Nonetheless, in February 1946, RCAF ground crews at two British stations (and one German base) did feel obligated to demonstrate against the government's demobilization policy and occupation force commitments. Their protest took the form of sit-down strikes, letter-writing campaigns to politicians and communicating their grievances directly to the Canadian people.

The troubles at the Odiham and Down Ampney RCAF stations were not spontaneous outbursts of discontent expressed by men simply tired of waiting to go home and hence grasping for any means of accelerating the process. These frustrations had been brewing for some time, and announcements in January 1946 about demobilization dates had an unintentional effect of acting as a catalyst to the February demonstrations. On 9 January 1946, Group Commander N. W. Timmerman (the commander of 120 Transport Wing Headquarters at Odiham, Hampshire) held a station parade where he outlined for 437 Squadron the government's policy concerning future occupation commitments in Europe. RCAF personnel were told that squadrons would begin disbanding on 31 March, that RCAF activities would gradually cease through to 30 June and that most RCAF personnel would be home by early autumn 1946. Two days later, Colonel Colin Gibson, the Minister of National Defence for Air, visited the station. Airmen were able to talk with the Minister about repatriation policies, and they were all reassured that they would be home by the fall.[9] Two other RCAF squadrons (435 and 436) making up 120 Transport Wing were stationed at a nearby base—Down Ampney, Gloucestershire. The men at this base were informed on 10 January by their Commanding Officer, Group Captain R. C. Davis, that 435 Squadron would be disbanding on 31 March 1946, that the entire RCAF occupational forces would be folding-up on 30 June 1946 and that everyone would be home by early September. Colonel Gibson visited Down Ampney on 16 January and "talked to the men and answered their questions on repatriation."[10]

Apparently, the answers given to the ground crews of both stations were not satisfactory, for, on 5 February, the Odiham station diary recorded that, "today, the unprecedented happened in the RCAF at this station - the other ranks mutinied." All personnel had turned out at 0900 hours for the commanding officer's weekly troop inspection, but after the inspection, 1,500 men refused to return to work thus carrying out their decision, made two weeks previous, to hold a strike in protest of the government's repatriation policies. The main issue for the airmen had been a published statement by the Minister of National Defence for Air indicating that four-fifths of the RCAF personnel overseas had volunteered to stay in Europe. The airmen wanted this erroneous figure corrected (only one-fifth of the RCAF occupational force were volunteers) because "many were receiving letters asking why they had volunteered for occupation service and why they were not coming home to join their families." Consequently, the airmen decided they had to clear-up this misconception and take a stand: they told their Commanding Officer that they would not return to work until the government defined definite repatriation dates and corrected the misinformation about volunteer rates that were being reported by the newspaper and radio media.[11]

Immediate action was taken by the RCAF: the Acting Air Officer Commanding-in-Chief for overseas—Air Commodore H. B. Godwin—arrived on the station and held a meeting with the striking airmen at 1600 hours that day. Despite promises that RCAF officials would pressure the government to correct the erroneous information being propagated by the media, "the airmen did not seem to derive the satisfaction they desired from the talks by senior officers." Nevertheless, the Commanding Officer chose to have the station carry on as normal; personnel were not confined to camp, and "entertainments were held as usual." The commander of 120 Transport Squadron Headquarters in Odiham decided not to shun

the media, but rather to follow "a policy of wide publicity." Hence, not only did he give interviews, but Group Captain Timmerman allowed airmen to give as many interviews as they wished as well.[12]

Wide publicity was exactly what the airmen wanted—to get their grievances about slow repatriation aired and to get the misinformation about their volunteer status corrected for the Canadian public.[13] One leading aircraftsman interviewed was openly critical of the Canadian government's recent policy decisions: "We are being kept over here against our will. The government made certain commitments for an occupation force, and it first was planned that these troops would be volunteers. It got them, then sent them home and discharged them. We are not volunteers for the occupation." It did not bode well with the airmen that RCAF personnel in Canada with the same repatriation points standing as personnel overseas were being released first.[14] Frustration over slow repatriation was exacerbated by the news that shipping was being provided for English wives and children of Canadian servicemen wanting to relocate to Canada. Not only were these civilians being given preferential treatment over those who had served on the front lines, but this transport of wives and children also demonstrated for the airmen that government claims of shipping shortages were not believable.[15] A major source of frustration stemmed from the airmen's sense that their presence in post-war Europe was not essential, and barely necessary. Crews complained that flying new air routes and carrying civilian passengers for British airlines was something civilians should be doing. Although most attention was placed on the repatriation demands, there were indications that deteriorating rations quality and quantity was also an issue.[16]

Although the station diary at Odiham ended the day's entry with, "films were shown in the airmen's mess and a bridge tournament held in Canada House," 6 February was not as quiet as it sounded. Rumours had been circulating around Down Ampney, the other 120 Transport Wing station, that airmen would follow the example of their Odiham colleagues. Even though no strike took place that day, the next morning "maintenance personnel left work to attend a meeting ... at 1630 hours." Behaviour of officers and men alike revealed that it was known throughout the station that a strike was in the offing. At the meeting, the station warrant officer passed along a request from the Commanding Officer for the maintenance personnel to send representatives to meet with him: "a reply was made by them that they would only send representatives if written guarantee could be given by the Commanding Officer that no disciplinary action would be taken." Since this request was refused, between 800 and 1,000 ground crew began a sit-down strike at 1330 hours. Group Captain Davis met with the airmen at 1500 hours to hear their complaints, but no progress toward a solution was made. The station diarist recorded that, "the airmen were very disorderly throughout the meeting." The Commanding Officer of 120 Transport Wing arrived at 1700 hours and spoke with the airmen; unfortunately, "a very poor reception was given."[17] Still no progress was made in satisfying the airmen and ending the strike. The Down Ampney men were serious about pressing their issues.[18]

By the end of 7 February, the RCAF had close to 2,500 personnel on strike, with the ever imminent potential that this number could increase at any moment. Station commanders, because essential services were running at both stations, decided to adopt a "policy of sitting back and allowing the personnel plenty of time to think and use common sense."[19] Officers recognized that the Air Force was very much a "citizens' army," and officials realized that the issue was not Air Force leadership but rather government higher policy. Hence, "the incident was classed as a strike" rather than the mutiny it technically was.[20] The striking airmen emphasized this important distinction as well.[21] Since the men were not striking in protest of any superior officer or his demands, they did not consider themselves to be mutineers.

Because the purpose of their demonstration was to bring "the men's plight to the attention of the Canadian government,"[22] the airmen did not simply depend upon RCAF officials and the media to pass along their messages of discontent; instead, they contacted government officials directly. In addition to writing their parliamentary representatives, Odiham airmen actually cabled Colonel Gibson, the Minister of National Defence for Air, and demanded his resignation.[23] Ground crew from Down Ampney boldly telegramed Prime Minister W. L. M. King with their complaints.

Colonel Gibson made sure that the media reported his responses to the airmen. Firstly, without hesitation, he admitted that the majority of the airmen still overseas were not volunteers: "They were selected for duty."[24] According to Gibson, the uproar caused by the four-fifths figure had been due to the media's misquoting his actual statement.[25] Gibson also explained why so many non-volunteers had been kept overseas: since the RCAF had not been recruiting new men since 1944, there was a shortage

of ground crews for the occupational force. Despite airmen's feeling that their presence overseas was not important, the Minister reassured all that "their presence is very essential to assist in maintaining control of enemy country."[26] Transport squadrons were responsible for flying medical supplies, clothing, food, mail and technical equipment to cities in Europe and India. Although airmen saw little merit in transporting passengers to the continent, Gibson explained that this kept squadrons in a state of operational readiness, in case a crisis broke out again in former enemy territory.[27] In response to airmen's complaints "that personnel in Canada were being released before overseas personnel with the same point standing," Gibson had to admit that personnel with lower repatriation group numbers were being released, but these men were non-volunteers as well, and in Canada, they were surplus to the needs of the RCAF.[28] The good news, so Gibson thought, was that 500 replacement ground crew were being sent which would permit the repatriation of some non-volunteers; the first 250 would be leaving Canada the last week in February.[29]

None of the airmen at the two stations were satisfied with the news of merely 500 replacements; hence, the strikes would continue. On the third day of the protest, strikers at Odiham presented their Commanding Officer with a three-point ultimatum for him to forward to RCAF Headquarters in London.[30] With no resolution in sight, the government and Air Force officials began talking tough. On 7 February, the third day of the Odiham strike and the first day for Down Ampney, the Minister of National Defence for Air warned the airmen that, "we cannot tolerate continuance of refusal to carry out normal duties." In the same statement, he also threatened that, "early repatriation will not be provided for those who take part in serious breaches of discipline."[31] RCAF Headquarters in Ottawa also took on a more threatening stance; officials decided that if the strikers did not return to work by Monday morning, 11 February, then the action would be considered a mutiny, and penalties would be implemented: pay would be stopped, dependents' allowances and post-war gratuities would end, repatriation would be delayed and court-martial could ensue.[32] Group Captain F. A. Sampson, personnel officer at RCAF Headquarters in London, was tasked with announcing these terms in person to the strikers at both stations.

Almost immediately after the visit of Group Captain Sampson to Odiham, the strikers decided that they would not defy the deadline. One corporal admitted that fear drove them back to work: "To put it bluntly, we went back because we were scared. But at least we 'hotted up' the wires between here and Ottawa."[33] By Saturday morning, 9 February, approximately ninety percent of Odiham's strikers had returned to work. At 0815 hours Monday morning, all men were on parade, greeted by a smiling Group Captain Timmerman who told his airmen that, "You've done a wise thing in returning."[34] The first reaction of the Down Ampney strikers to Ottawa's ultimatum was to remain on strike and refuse to compromise; they wanted a satisfactory reply to the telegram they had sent the Prime Minister.[35] After a meeting of the strikers on Saturday afternoon, the men accepted the recommendation of their strike committee and reversed the earlier decision to defy the 11 February deadline. Men freely admitted that the decision was taken "because a lot of them have high repatriation numbers, and they aren't going to jeopardize their chances of getting home early."[36] Monday morning, all personnel were assembled for the 0815 parade. The strikes were over.

The officers at the affected stations were surprisingly good natured and tolerant with the striking airmen. Officers and senior NCOs took over many of the airmen's duties to keep the stations running and open for regular flying schedules. They drove motor transport vehicles; handled arriving casualties; carried out maintenance, inspections and minor equipment repairs; and they worked in the messes as well.[37] In the wake of the strike, the Commanding Officer at Odiham saw to it that amenities for personnel were increased to help make the stay overseas and away from families more bearable. By the end of February, live shows were held in the airmen's mess each night, and twice a week, movies were shown in the airmen's mess, the officers' mess and the hospital. The station boasted a camera club, musical appreciation hours as well as badminton, basketball, tennis and gymnastics facilities.[38] Some discomforts could not be changed, for officials had no control over the poor weather and daily rains that earned Down Ampney its nickname of "Deep Agony."[39] RCAF officials back in Ottawa were powerless to change government policy, nor could they speed up repatriation as the airmen so badly wanted. The efforts from Ottawa to improve the airmen's morale appear not only to badly miss the mark, but they also seem to be an amusing misunderstanding of the strikers' real concerns. Powdered ice-cream and chocolate syrup—this was not what the ground crews wanted, but what else could RCAF officials do? Their hands were tied by government commitments.[40]

Theoretical Framework and Leadership Doctrine

The role of a leader is to influence people, provide purpose and direction and motivate subordinates to fulfill the mission with which they have been tasked. Successful leaders filter out negative influences and sustain the group's morale and motivation. Several factors determine how effective a leader can be: the leader's proximity, the intensity of the demands, the legitimacy of authority and the respect that he or she is able to command. In order to gain respect, leaders need to form bonds with subordinates, and leaders must be seen as taking active interest in the welfare of their soldiers. If leaders are perceived to be loyal and trustworthy and can keep the lines of communications open, mutinies can be prevented by preemptively removing conditions fostering discontent, rebellion and mass protest.[41] If formal leadership is deemed to have failed, then the betrayed subordinates will look to informal leaders amongst themselves, and these de facto leaders may convince their fellow soldiers to mutiny as a means of expressing their pent-up displeasure over failed communications and breached contracts.[42]

According to both E. P. Thompson and Craig Mantle, the concept of the oppressed crowds defending a moral economy was a powerful tool of agency that the masses deliberately circumscribed with self-imposed limitations. The goal was not to overthrow the existing system and instigate a revolution; the aim was to restore acceptable living conditions and regain respectful behaviour by those in authority toward those in subordinate positions. Hence, mutinies can be analysed from both the top-down and from the bottom-up. Lessons can be learned about deficient leadership and what leadership characteristics should be cultivated so as to prevent mutinies. Lessons can also be learned about what constitutes a service's moral economy, what military personnel expect from their leaders in return for their service and what preemptive actions can be taken to not breach the implicit social contract between personnel and the institution, thus avoiding the precipitation of a mutiny.

Leadership in the modern Canadian Forces (CF) has undergone considerable study and the doctrine is taught to those choosing the CF as a career. Unlike those who volunteered during the First and Second World Wars, current members of the CF have the luxury of time—time for a doctrine to be created, time for curricula to be developed and time to make a personal life-long investment in Canada's armed forces. Hence, it must be understood that the volunteer forces who were fighting the wars did not have the benefit of years' of study into the leadership relationship. These volunteers learned by trial and error as they faced the enemy on a daily basis.

According to *Duty with Honour: The Profession of Arms in Canada*, the military profession has four main attributes: responsibility, expertise, identity and the military ethos. Under the attribute of responsibility comes the obligation of leaders "to ensur[e] the care and well-being of their subordinates."[43] Effective CF leadership is defined as "directing, motivating, and enabling others to accomplish the mission professionally and ethically while developing or improving capabilities that contribute to mission success." The importance of subordinate well-being is a message clearly and frequently articulated in the doctrine manuals. Member well-being is one of the five dimensions of collective effectiveness—which leadership roles exist to serve. Leadership must also "build and maintain healthy trust relationships with subordinates, peers, and superiors." "Developing and looking after CF members" is one of the institutional values that define CF effectiveness. According to leadership doctrine, "the whole purpose of leadership in the CF is to achieve essential outcomes," which are mission success, internal integration, member well-being and commitment as well as external adaptability. As sustainers of member well-being, leaders are responsible for unit climate, fair treatment, conflict and complaint resolution, the representation of interests as well as the building of morale and commitment. Ultimately, "leadership is about influencing people to accomplish tasks." Studies have shown that effective leaders are those who have the respect, dedication and confidence of their subordinates.[44]

Lessons Learned

Men and women joining any of the three services do so knowing that they must be obedient to lawful commands and surrender many of their civilian attitudes. Nevertheless, in return for this surrender, these men and women expect fair treatment, respect as individuals with something worthwhile to contribute and good leaders who care about their subordinates. Their expectation of leaders capable of meeting these requirements is not unreasonable, nor is it that difficult for leaders to achieve the desired level of competency. Forming bonds with subordinates by showing concern, respect and interest in them creates a sense of loyalty. By building trust, leaders can fulfil their role of influencing

and motivating subordinates to fulfill their duty. This trust can be built by making certain that subordinates' physical and emotional needs are fulfilled, preferably before the masses start complaining about their conditions of service. The key to good leadership, good leader-subordinate relations and good morale is communications. Leaders need to be willing to listen, and subordinates need to feel free to share their concerns. Leaders need to give subordinates a sense of purpose, and subordinates need to feel that they have an important part to play in the greater mission. Good leaders look out for the welfare of their subordinates, and hence, the social contract is automatically upheld. Subordinates are expecting leaders to care for them, and if these unspoken obligations are not met, the subordinates will hold their poor leaders accountable and demand redress. Consequently, leadership and the moral economy are inextricably intertwined in both the creation and prevention of mutinies.

Notes

1. Letter from Major J. McCrimmon to CAF Section (OMFC Headquarters, London), 7 January 1919, Library and Archives Canada (LAC) File Record Group (RG) 9 III B1 Volume 3430 File D-2-49.

2. Letter from General Staff (OMFC Headquarters, Argyll House, London) to Colonel Sadler (RAF School of Technical Training, Halton Camp), 23 January 1919, LAC File RG 9 III B1 Volume 3430 File D-2-49.

3. Memorandum from Captain A. E. McKeever (Commanding No. 1 Squadron, CAF Upper Heyford), 7 January 1919, LAC File RG 9 III B1 Volume 3432 File R-4-49.

4. Memorandum from Captain A. E. McKeever (Commanding No. 1 Squadron, CAF Upper Heyford), 12 January 1919, LAC File RG 9 III B1 Volume 3432 File R-4-49.

5. Letter from Major C. M. Marshall (Canadian Detachment RAF, Upper Heyford) to Lieutenant-Colonel C. M. Edwards, 28 January 1919, LAC File RG 9 III B1 Volume 3068 File A-6-36.

6. Weekly Report from Major C. M. Marshall (Canadian Detachment RAF, Upper Heyford) to RCAF Section (OMFC Headquarters, London), 25 February 1919, LAC File RG 9 III B1 Volume 3430 File D-2-49.

7. Weekly Report from Major C. M. Marshall (Canadian Detachment RAF, Upper Heyford) to RCAF Section (OMFC Headquarters, London), 13 March 1919, LAC File RG 9 III B1 Volume 3430 File D-2-49.

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9. RCAF Station Odiham Diary, 9 January 1946, 11 January 1946, Directorate of History and Heritage (DHH) Reel 277.

10. RCAF Station Down Ampney Diary, 10 January 1946, 16 January 1946, DHH Reel 277.

11. RCAF Station Odiham Diary, 5 February 1946, DHH Reel 277; "RCAF Strike Still On," *Stratford Beacon-Herald*, February 6, 1946, DHH File 78/47; quotation from "Demand Faster Repatriation," *Ottawa Journal*, February 6, 1946, DHH File 78/47.

12. RCAF Station Odiham Diary, 5 February 1946, DHH Reel 277.

13. "Demand Faster Repatriation," *Ottawa Journal*, February 6, 1946, DHH File 78/47.

14. Quotation from "Flyers Refuse to Work Until Demands Met," *Hamilton Spectator*, February 6, 1946, DHH File 78/47; "Replacements Promised as More Men Quit," Paper Unknown, February 7, 1946, DHH File 78/47.

15. "1500 RCAF Ground Crew Strike in UK," *Winnipeg Free Press*, February 6, 1946, DHH File 78/47; "Airmen's Strike," *Saskatoon Star-Phoenix*, February 7, 1946, DHH File 78/47.

16. "RCAF Strike Spreads; Ottawa Gives Warning," *Vancouver Province*, February 7, 1946, DHH File 78/47; "Warning Sent Strikers Repat Chances Reduced by Breach of Discipline," *Toronto Evening Telegram*, February 7, 1946, DHH File 78/47; "Down Ampney Airmen Quit Sit-Down Strike," *Hamilton Spectator*, February 9, 1946, DHH File 78/47.

17. RCAF Station Odiham Diary, February 6, 1946, DHH Reel 277; RCAF Station Down Ampney Diary, February 1946 Appendix, DHH Reel 277.

18. "No Break Yet in Strike of RCAF Airmen," *Ottawa Citizen*, February 8, 1946, DHH File 78/47; "Replacements Promised as More Men Quit," Paper Unknown, February 7, 1946, DHH File 78/47.

19. RCAF Station Odiham Diary, 7 February 1946, DHH Reel 277.

20. RCAF Station Odiham Diary, 5 February 1946, DHH Reel 277.

21. "800 Down Ampney Men Vote to Continue Strike," Paper Unknown, February 8, 1946, DHH File 78/47; No. 120 Transport Wing Headquarders Station Record Book, 5 February 1946, DHH Reel 277; "Flyers Refuse to Work Until Demands Met," *Hamilton Spectator*, February 6, 1946, DHH File 78/47; "No Break Yet in Strike of RCAF Airmen," *Ottawa Citizen*, February 8, 1946, DHH File 78/47.

22. "More Striking Airmen Returning to Duties," *Winnipeg Free Press*, February 9, 1946, DHH File 78/47.

23. "Replacements Promised as More Men Quit," Paper Unknown, February 7, 1946, DHH File 78/47; Telegram from Down Ampney Ground Staffs to Prime Minister W. L. M. King, 7 February 1946, Manuscript Group (MG) 26 J1 Volume 416 Reel C9176 p. 373437.

24. "Demand Faster Repatriation," *Ottawa Journal*, February 6, 1946, DHH File 78/47.

25. "Airmen's Strike," *Vancouver Sun*, February 9, 1946, DHH File 78/47.

26. Quotation from "Homesick RCAF Unit Will be Replaced," *Vancouver Sun*, February 9, 1946, DHH File 78/47; "Airmen's Strike Halts Movement of Medicine, Food," *Saint John Telegraph-Journal*, February 8, 1946, DHH File 78/47; "RCAF Men Call Off Strike," *Vancouver Province*, February 8, 1946, DHH File 78/47.

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29. "Replacements Promised as More Men Quit," Paper Unknown, February 7, 1946, DHH File 78/47.

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31. "RCAF Strike Spreads; Ottawa Gives Warning," *Vancouver Province*, February 7, 1946, DHH File 78/47.

32. "Down Ampney Ground Crews Stay Off Jobs," *Hamilton Spectator*, February 8, 1946, DHH File 78/47.

33. "Down Ampney Ground Crews Stay Off Jobs," *Hamilton Spectator*, February 8, 1946, DHH File 78/47; quotation from "More Striking Airmen Returning to Duties," *Winnipeg Free Press*, February 9, 1946, DHH File 78/47; "Down Ampney Airmen Continue Walkout," Paper Unknown, February 8, 1946, DHH File 78/47.

34. RCAF Station Odiham Diary, 9 February 1946, DHH Reel 277; quotation from "More Striking Airmen Returning to Duties," *Winnipeg Free Press*, February 9, 1946, DHH File 78/47.

35. "No Compromise: Striking Airmen Ask Resignation of Air Minister," *Sydney Record*, February 8, 1946, DHH File 78/47.

36. "Down Ampney Airmen Quit Sit-Down Strike," *Hamilton Spectator*, February 9, 1946, DHH File 78/47; Telegram from Down Ampney Ground Crew to Prime Minister W. L. M. King, 9 February 1946, MG 26 J1 Volume 416 Reel C9176, 373416-7.

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40. No. 9 Transport Group Headquarters Diary, 14 February 1946, DHH Reel 277.

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Chapter 5

Air Defence Leadership During the RCAF's "Golden Years"

Richard Goette

Introduction

The 1950s have been called the "Golden Years" of the Royal Canadian Air Force (RCAF), when the service was at its apex. As James Eayrs has noted, during this time the RCAF's "role was more easily defined, its status more prestigious, its connections more powerful. Its funds, in consequence, were more plentiful and its future more assured."[1] Military spending in fact skyrocketed during the 1950s, with the defence budget going from approximately 1.4 percent of the gross national product in 1947 to 8.8 percent by 1952–1953. The RCAF received a significant portion of these funds, more than the Canadian Army and Royal Canadian Navy (RCN) combined, and much of it was dedicated to air defence.[2] However, as will be argued here, in addition to this increased funding for air defence, the RCAF also had to deal with increased responsibility and accountability as well as tough choices regarding priorities. Therefore, this article will examine how the Canadian Air Force leadership capitalized on and protected its increased defence spending for air defence in the early cold war period.

In discussing this topic, this study will provide historical examples of what the Canadian Forces' (CF) leadership manual[3] has termed "institutional leadership." According to this publication, the "leading the institution" function requires that service's/environment's senior leaders and their staffs fulfil their unique responsibility "for sustaining and developing the systems and capabilities that the CF requires to meet its defence commitments, both now and into the future—that is, to deliver the requisite capability to meet Government's goals."[4] The RCAF leadership sought to do these very things during the 1950s.

At that time, the primary focus of the Air Force's funding, plans and operations was on the air defence mission to defend Canada and the North American continent (in conjunction with the United States) from a potential Soviet aerial attack from manned long-range strategic bombers. In order to justify the large expenditures that the Canadian Government dedicated to air defence, RCAF leadership had to effectively command and manage their personnel and resources. As such and in this case, institutional leadership therefore necessitated that the leaders of Canada's Air Force also fulfil an important air power—and specifically air defence—advocacy function during the early cold war.

Indeed, this important part of the RCAF's history has largely been untold. Instead, most examinations of North American continental air defence have focused on the "political" approach of the government and the Department of External Affairs. This has meant that the historical writing on the service tasked to undertake this crucial responsibility (i.e., the RCAF's actual role in air defence) and examination of air defence doctrine (as an important part of Canadian air power in the cold war) has been largely neglected. This article will attempt to make a beginning towards filling this gap in the RCAF's history. It is not intended to be an exhaustive history of air defence leadership in the 1950s but a snapshot of some of the issues that the RCAF leadership had to face during this time. However, before beginning this examination, a brief discussion on the writing of cold war Canadian Air Force history is in order.

Historiography

Unfortunately, academic research and writing on the post-Second World War RCAF has been very minimal, leaving the current Canadian Air Force with relatively few scholarly accounts of historical precedents upon which to base and grow its current air power mission. There are several reasons for this. For one, as alluded to above, most academic work on the Canadian Air Force and, in particular, air defence has focused on the "political" approach, with the service or "functional" focus being neglected.[5] In addition, much of the academic writing has been done not by historians, but by political scientists. Simply put, there are not that many academic Canadian air force historians. Indeed, most striking is the marked lack of **civilian** academic air force historians in Canada, for at least there are a few Air Force officers currently in uniform who study the history of their service/environment.[6]

One of the main reasons for the lack of a foundation for cold war academic air force history is because of the absence of an official history on this period. Due to budget cuts in the 1990s, the fourth volume in the Department of National Defence Directorate of History and Heritage's (DHH) official

history of the Air Force, which would have covered the post-war period, was scrapped. Perhaps even more unfortunate is the fact that no preliminary work—the excellent narratives that DHH produces upon which the official history are based—was undertaken.[7] Finally, there is also an issue of access to the primary source research that has hampered academic Air Force history writing in Canada. One factor, especially in terms of air power leadership studies, is that that there are very few memoirs written by or biographies written about the RCAF's senior officers. Another has to do with the primary source document records. Although the Directorate of History and Heritage has an excellent collection of cold war documents, notably the invaluable Raymont Collection,[8] the majority of the relevant RCAF files are held at Library and Archives Canada and are, unfortunately, still restricted.

A comparison of this situation with the scholarly history of the United States Air Force (USAF) is revealing. There are, to be sure, also similar issues facing American academic air force historians such as certain documents remaining restricted in US archival institutions. Nonetheless, in terms of memoirs/biographies, official histories and historical narratives, the record is much better. This is especially true regarding the latter, as there are a bevy of USAF and command narratives. A good example can be seen in Joseph Jockel's recent book[9] on the 50th anniversary of the North American Air Defence Command (NORAD), as this American political scientist made good use of the command narratives and a select number of documents held in the NORAD / United States Northern Command History Office in Colorado Springs. In any event, it is the hope of this author that more Canadian academic air force historians will soon be able to address these issues in order to produce excellent scholarly history on the cold war RCAF. This article on air defence leadership in the RCAF's Golden Years will, thus, hopefully be a small part of an overall renaissance of academic Canadian Air Force history.

From Lean Years to Golden Years

Although the 1950s have become known as the RCAF's Golden Years, the years immediately following the Second World War—the mid-to-late 1940s—were anything but golden. Like the other two Canadian services, following the Second World War the RCAF demobilized quickly and dwindled to a strength of only 12,200 all ranks, including 650 in the RCAF Auxiliary.[10] Indeed, it was this Auxiliary that was charged with providing protection for all of Canada against aerial attack in the immediate post-Second World War period. It eventually grew to 15 squadrons (located in the large cities across the country) with pilots flying P-51 Mustangs and later Vampire jet fighters.[11]

Admittedly, the aerial threat from the Soviet Union during these years was negligible and consisted of manned bombers such as the Tu-4 Bull (a reverse-engineered copy of the famous B-29 Superfortress) armed with conventional bombs.[12] In the first three years after the Second World War, the Allies were still basking in the glory of their hard-fought victory over Germany and Japan, and the cold war superpower rivalry was not yet apparent. However, friction between the Soviet Union and its former allies was brewing, and the Berlin Airlift Crisis of March 1948 brought the possibility of war—and Soviet air attacks on North America—to the fore.[13] This consequently brought forth the issue of whether or not Canada had the forces and organization necessary to deal with the new aerial threat.

In 1948, to say that Canadian air defences were inadequate would have been an understatement. The air defence situation was perhaps best revealed in a capabilities-based emergency defence plan for Canada released that year. Although the Air Defence Appendix of the plan anticipated only a small Soviet bomber capability, it stated bluntly that "there are no defences immediately available."[14] In fact, besides the Auxiliary, the only air defences on hand in the country were those of the Royal Canadian Navy: four squadrons of fighter aircraft (eight machines per squadron) and the anti-aircraft guns of the naval ships "which happen to be in port."[15] In light of the Berlin Crisis, the RCAF leadership began to devise means to address this concern, and one of the ways it did so was deciding how to organize its major commands.

During this period, the Canadian Chiefs of Staff Committee decided to re-categorize Canadian defence roles to reflect the cold war environment. Each Canadian service was assigned "primary responsibility" for tasks to be undertaken regarding certain potential threats to the country. The RCAF was responsible for air defence; the RCN for coast and seaward defence; and the Army for reducing enemy lodgements on Canadian territory.[16] In terms of organizing forces to fulfil this role, the Canadian Army and Royal Canadian Navy decided to maintain their existing regional/geographic command organization. The RCAF, however, felt differently about its organizational structure. When Air Marshal W. A. Curtis became the Chief of the Air Staff (CAS), he insisted that the various roles of an air force necessitated that the RCAF be organized on a functional basis. After some resistance from

Minister of National Defence (MND) Brooke Claxton, Curtis was finally able to win him over to the functional organizational ideal. With the re-categorization of the armed forces' defence roles in 1948, this insistence by the CAS laid the foundation for Air Defence Command with the establishment of Air Defence Group (ADG) later that year.[17]

Indeed, this reorganization represented a significant reorientation of the RCAF during the cold war from the strategic bombing role that it had performed during the war to one more focused on air defence and reconnaissance.[18] The RCAF did have post-war plans to establish a Strategic Air Command (SAC) that would be very similar to USAF's strategic bombing command organization of the same name.[19] However, a comparison between the size of a B-29 to the latest USAF SAC bomber of the time—the B-36 Peacemaker—vividly shows that the skyrocketing costs of maintaining a strategic bomber force in the post-Second World War atomic age era forced the RCAF to give up its plans for a Strategic Air Command. Instead, its focus became more on cooperating with the United States in the air defence of North America.[20] When the RCAF leadership centralized responsibility for protecting the country from air attack under Air Defence Group in December 1948, it only consisted of No. 410 (Fighter Squadron) and No. 1 (Fighter) Operational Training Unit. Although organized as a group, due to its wide range of responsibilities and in the words of Curtis, ADG was "in effect therefore a command."[21] Indeed, the growth in the need for greater air defences soon made this a reality in name as well.

The Air Defence "Crisis" and the Establishment of RCAF Air Defence Command

The year 1950 saw an air defence "crisis situation," which was caused by the Soviet Union's explosion of an atomic bomb in August 1949 and was heightened by the outbreak of the Korean War the following June. With the cold war turning "hot" in the east, military leaders were finally convinced of the need for proper continental air defences due to the growing possibility that Soviet Tu-4s could strike at North American targets. In the early 1950s, this led to the establishment by the US and Canada of an extensive system of radars and greater attention to—and priority funding for—air defence.[22] Air Defence Group grew significantly, and effective 1 June 1951, it was elevated to command status. The new Air Defence Command (ADC) exercised "overall operational control" of the forces assigned to it, and this included the Canadian Army's Anti-Aircraft Command.[23] Although similar to American Joint Chiefs of Staff (JCS) unified commands, the new RCAF Air Defence Command was not a unified command arrangement but a joint command. Regardless, with the establishment of the ADC in the early 1950s, Canadian air defences were adequately centralized under RCAF authority.[24]

The new RCAF command benefitted greatly from the accelerated defence program announced by the Canadian Government in 1950. With air defence a high priority, ADC expanded significantly, reaching its authorized strength of 19 fighter-interceptor squadrons (9 Regular Force and 10 Auxiliary) by 1955.[25] The goal of the RCAF during this period was to increase the number of operational squadrons and in so doing both reduce its non-combat effort and increase its combat elements. Priority would be given to air defence and maritime operations in particular, "and the major re-equipment programme would of necessity be confined to aircraft for air defence, early warning and control equipment, and installations for vital target areas."[26]

Indeed, these factors—especially greater funding for the Air Force—were not lost on the RCAF leadership. The Acting CAS, Air Vice-Marshal A. L. James, noted in particular during a 1950 Air Officers' Commanding and Group Commanders Conference, "that the RCAF has been allocated more funds than either of the other Services is significant of the importance attached to air supremacy by the Government and the Chiefs of Staff." However, James added, with this recognition came more responsibility and the need for greater care and caution to be exercised by the RCAF:

> But even though the Navy and Army Chiefs of Staff have recognized the prime importance of air supremacy, they still had valid reasons as to why their own programmes should be increased. Consequently, the RCAF would be open to the most careful scrutiny by the other Services, the government and the public. Evidence of uneconomical operation, flagrant waste of public monies, or lack of smartness would obviously result in us losing the confidence of the Government and might easily prejudice our future.[27]

There were several factors that allowed the RCAF brass to fulfil their institutional leadership function by ensuring greater efficiency in the RCAF in general—and its air defence role in

particular—in order to justify greater government funding for the service. They included: raising the profile of the RCAF; professional development and increasing intellectual air power discourse; getting together to discuss issues of concern to the RCAF; making tough choices regarding priorities; taking care of its people; and ensuring that the RCAF got a "piece of the action" when it came to continental air defence. Each factor will be discussed briefly.

Raising The Profile of the RCAF

One key policy that the RCAF undertook during the Golden Years was to raise the profile of the service in Canada among the Canadian Government and public. In doing so, the RCAF leadership fulfilled what the CF leadership manual has termed the institutional leadership function of "influencing the external environment, through direct advice and influence, public affairs activities, strategic partnerships, and professional networking."[28] In other words, as Air Marshal Curtis stressed at the time, to accomplish these goals "the overall efficiency, dress and deportment of the RCAF must be improved in order to foster public support."[29]

Publicity for the Air Force was important, but with greater government and public scrutiny focused on the RCAF as a result of its high funding level, it was crucial that any **negative** publicity be avoided at all costs. Furthermore, measures that increased **positive** publicity for the service were implemented.[30] These included more visible displays of the Air Force such as the Memorial Gates ceremony at Trenton, the air cadets and public performances by RCAF aircraft such as the Golden Hawks.[31] It also included reaching out to other groups in Canada and actually speaking about what the RCAF did in general and its air defence role in particular.

A good example is a series of speeches on air power and the role of air forces given by Air Commodore Clare Annis in the early-to-mid 1950s. Annis was well placed to give such talks, being the Senior Staff Officer with ADC from late 1953 until September 1954, at which time he took over as Acting Air Officer Commanding Air Defence Command (until January 1955). Although in some instances Annis was "preaching to the converted" in that some audiences included groups such as the Montreal United Services Institute and Montreal Air Force Veterans' Association, other audiences were more representative of the Canadian public in general, such as the Trenton Chamber of Commerce and the Canadian Club of Montreal.[32]

In particular, Annis raised the profile of the RCAF's air defence mission by discussing in general terms the means by which the Air Force would fulfil this important role. To illustrate, in one speech, Annis not only outlined the Soviet bomber threat to the continent, but also gave an example from the Second World War, describing how the Germans made a crucial mistake by not deploying their fighter squadrons further north in order to intercept Allied bombers more quickly. In so doing, Annis was therefore advocating the air defence concept of "defence in depth": that it was necessary to intercept and engage an enemy as far away from his target as possible and to increase the pressure on him the closer he neared his objective by employing large numbers and varieties of weapons. In the case of North America, this meant pushing the air battle as far north as feasible, thereby ensuring that it could be fought most effectively within the shortest amount of time of the continental radar network detecting an incoming bogey.[33] Furthermore, Annis also outlined the details of this air defence concept to his audience by comparing it to a game of rugby:

> The fighters are the line of the rugby game. Their duties are two-fold. It is hold the line and prevent the enemy bombers from getting through. We know that for as long as the line holds, the enemy bombers won't get through very far or very often. The second duty of the fighters is to wear down and finally crumple the enemy line. If that is achieved our bomber backfield [i.e., USAF Strategic Air Command] can roam at will.[34]

By describing the concept of "defence in depth" in such terms, Annis was therefore able to make air defence mission much more understandable—and justifiable—to the regular Canadian citizen.

Another targeted audience for air power presentations included the other services. A good example of this is a speech by Air Commodore Keith Hodson that he gave to the Canadian Army Staff College in 1955. Entitled "The Role of Air Power," Hodson outlines not only the value of the air weapon to armies in joint land operations, but also the destructive power of strategic bombing, especially from aircraft armed with nuclear bombs, and the resulting need for greater **peacetime** air defences. These were essential, the RCAF officer argued, not only to defend the continent's vital areas, but also to protect the deterrent provided by the USAF's Strategic Air Command.[35]

Such talks given to the Canadian public and the other services provided an essential publicity and air power advocacy function for the Air Force. They brought influential and relevant parties up to speed with the most recent developments in air defence, thereby reinforcing and justifying the RCAF's large peacetime funding.[36] Nonetheless, in order to have officers capable of articulating the RCAF's air defence mission to audiences, it was also essential that they have the proper knowledge of current air power issues.

Professional Development and Intellectual Air Power Discourse

Related to the endeavour of the RCAF leadership to raise the profile of the Air Force was their effort to improve professional development and intellectual air power discourse. As the CF leadership manual states, senior service/environment leaders "have special responsibilities for maintaining professional capabilities... [They] must not only epitomize professional qualities, but also assume, by virtue of their status, broad responsibilities to foster and maintain a culture based on military professionalism."[37] As such, it is crucial that senior leaders exercise a stewardship role for the profession by ensuring that they "constantly extend the boundaries of professional knowledge."[38] Indeed, this was applicable to the RCAF during the 1950s, as the service's leadership implemented a number of methods to improve the service's air defence professionalism.

Professional development in the RCAF was partially achieved through officer exchanges with other air forces and in particular by requiring Air Force officers to attend the RCAF Staff College. Now the current site of the Canadian Forces College, the RCAF Staff College was established at Armour Heights in Toronto in 1943. Training has always been an important aspect of an officer's career, but at the Staff College, RCAF officers received professional development in the form of air power **education**. As Colonel William Lewis has recently noted, education fulfils a crucial role in ensuring that Air Force personnel can "operate effectively in a complex military environment" by providing them with the necessary "crucial intellectual skills and specific competencies."[39] At the RCAF Staff College during the 1950s, education included thinking and writing about air power and learning from various experts in the field, be it the College's uniformed and civilian faculty or visiting lecturers.[40]

However, perhaps of equal importance for Air Force professional development was furthering intellectual air power discourse. This requirement necessitated having venues for these officers to publish their thinking and writing on air power. During the 1950s, the RCAF leadership provided this in the form of the *RCAF Staff College Journal* and *The Roundel* magazine. Much like the current *Canadian Air Force Journal*, the purpose of the *RCAF Staff College Journal* was "to encourage serious writing on topics of professional military interest."[41] Although the ideas expressed within its pages were those of the writers and did not, of course, necessarily reflect official policy, they were key to an understanding of RCAF thinking and therefore performed a crucial advocacy role for air power in Canada. Articles included pieces by such well-known contemporary academics as Bernard Brodie, an expert on nuclear strategy, and operational research officers at Air Defence Headquarters.[42]

In addition, the publication also included articles by the RCAF Staff College faculty and students. A good example is a piece entitled "The Wisdom of Our Air Defence Policy"[43] written by Group Captain M. Lipton, a graduate of the Staff College and the institution's former Director of Studies. In this article, Lipton challenges criticisms of large Canadian defence spending on air defence brought forth by recently retired Canadian Army generals in the press[44] by outlining the importance of the RCAF's air defence mission. He explains that RCAF Air Defence Command's role is threefold: contributing to deterring the outbreak of nuclear war by protecting the main deterrent, USAF's Strategic Air Command, from surprise Soviet attack; operating an integrated system of radars with the United States to give the civilian population adequate warning for civil defence measures to be implemented, "whether it be evacuating cities or getting underground"; and protecting the industrial heartland of the continent (which also contained the largest population areas) by destroying a large percentage of the attacking bombers and thus minimizing the damage that the enemy can inflict on North America's war-making capacity.[45] Therefore, in closing, Lipton concludes that spending on RCAF ADC was justified because, through its role in the overall continental air defence system, it performed a crucial offensive as well as defensive function: "our air defence system is a significant and essential complement to the overall deterrent, and in the event of war would play a vital part in the success of offensive operations and the protection of our populated areas."[46] Indeed, in addition to articles such as this from the *RCAF Staff College Journal*, there was another venue in which the RCAF leadership could foster intellectual discourse and advocate its air defence role.

The Roundel was perhaps an even more important venue to get the air power advocacy message across, as it was much more widely distributed and read. In describing the purpose of the service magazine, Chief of the Air Staff Air Marshal Wilf Curtis warned about the increasing "specialization" in the RCAF. While acknowledging that it was a crucial element of a modern air force, the CAS noted that "the danger always exists that the specialist's view of the woods may eventually become somewhat obscured by the trees." As a remedy to this, Curtis called for "extensive reading and discussion" of air power issues to foster a "wider perspective which gives full meaning to [the RCAF's] individual tasks." Unlike the *RCAF Staff College Journal*, *The Roundel* was not solely academic in nature but addressed material that, as Curtis explained, "the Editorial Committee considers to be of particular interest and value to all ranks and trades of the RCAF."[47] Indeed, *The Roundel* served a vital role in providing awareness of the RCAF's air defence role. Besides specific articles on air power and air defence topics by Canadian, American and British experts, early issues of the *Roundel* also dedicated particular attention towards historical and contemporary air defence topics. These included operations in northern Canada and the Arctic as well as a series on Soviet military aircraft types and capabilities ranging from the Second World War to the present day.[48] As such, *The Roundel* performed a crucial advocacy function for the RCAF and offered a means for personnel from any rank to familiarize themselves with the most important issues facing the service.

Gathering "The Brass" Together to Discuss Issues of Concern to the RCAF

Another measure that the RCAF leadership had to undertake in the service's Golden Years to safeguard its air defence spending priority was to ensure that senior officers communicated with each other effectively on key issues concerning the RCAF. This was accomplished during the aforementioned Air Officers' Commanding and Group Commanders Conferences. Every six to twelve months the leadership of the RCAF, including both the top operational commanders and the senior officers from various Air Force Headquarters, gathered in Ottawa "in order to discuss Service problems of mutual interest."[49] Oftentimes the Minister of National Defence also attended.

These gatherings performed another important advocacy function. They allowed the RCAF to influence the "external environment," which in this case was to give the government a firsthand account of the goings-on of the service while at the same time giving the RCAF leadership insight on what the government expected from it.[50] Furthermore, by having all of the senior officers of the RCAF present to discuss issues facing the service, these conferences went a long way in ensuring that the RCAF leadership had the pulse of the Air Force, could come to agreement in a cooperative and collegial atmosphere and could have a united front to face any challenges. Indeed, one of the key tests that faced the Air Force brass had to do with prioritization.

Prioritizing and Making Tough Choices

The RCAF leadership had to make some tough choices regarding priorities for air defence protection and procurement. Ideally, the most effective air defence would be for an air force to have the capability to defend every square kilometre of the country. In light of the Soviet atomic threat (the USSR had secured its own A-bomb in 1949) and despite increased spending on air defence, this was simply not possible in the 1950s, as there were only so many air defence resources to go around. As a result, the RCAF leadership had to set priorities in terms of specific vital areas of the country that needed to be defended. It was not an easy decision to leave certain areas of the country unprotected, but the RCAF leadership had to think in terms of strategic bombing theory and decipher which "vital points" the enemy was most likely to target. As such, they decided to concentrate the RCAF's air defences, notably the six CF100 Air Defence Command squadrons, near the vital economic and population centres of the Great Lakes-St. Lawrence area and the west coast near Vancouver.[51]

When the Soviets exploded a thermonuclear weapon (H-bomb) in 1953, these priorities had to be re-assessed. As we have already seen, besides protecting vital industrial and population areas in Canada, the other main concern of the air defence system became one of providing sufficient warning of an attack. This was crucial not only to permit populations to seek shelter and allow civil defence measures to be implemented, but perhaps even more importantly in the eyes of airmen, to give the bombers of USAF's Strategic Air Command the time they needed to get off the ground to deliver a retaliatory strike. Protecting SAC air bases and, most crucially, the deterrent that it provided, therefore became a crucial consideration in RCAF and bilateral Canada-US air defence planning priorities.[52]

Fighter procurement was also a challenge faced by the RCAF leadership in terms of prioritization. As Colonel Randy Wakelam has demonstrated, "in the decade after the Second World War, the leaders of Canada's air force [sic] played a pivotal role in defining the organization and roles of Canada's fighter forces."[53] With the build-up of forces in NATO, the RCAF leadership also had to balance North American air defence requirements with expeditionary alliance responsibilities in Europe when it came to priorities for fighter-interceptor resources.[54] As such, a crucial aspect of meeting these requirements was another important institutional leadership task that the RCAF brass had to fulfil: the procurement of new aircraft that could perform the growing and increasingly technologically complex roles required of fighters during the 1950s. Interestingly, the RCAF's fighter procurement record during the Golden Years was a mixed bag of successes (the F86 Sabre and, to a degree, the CF100 Canuck) and outright disasters (the CF105 Avro Arrow).[55]

Lastly, the RCAF leadership made an important decision by supporting the American endeavour to build a series of radar warning lines across Canada to warn against a potential Soviet aerial attack. Much money and resources were dedicated towards the construction of the Pine Tree, Mid-Canada and Distant Early Warning (DEW) radar lines. They provided crucial warning time for ADC to act to protect vital areas and SAC, and they became crucial pieces in the overall Canada-US integrated, continental air defence system.[56] Indeed, the role and operation of these radar lines during the cold war has been largely neglected in the RCAF's historiography. Although some academics have begun to fill this gap,[57] much more still needs to be done.

Taking Care of People: Careers, Personnel and Working for the RCAF

Another important role that the RCAF brass undertook in the 1950s was to fulfil the institutional leadership function of taking care of the Air Force's most important resources—its people. As the CF leadership manual states:

> [S]enior leaders [are required] to assume the role of personnel champion. In this capacity, senior leaders must thoroughly understand *social contract* principles, must be pro-active in providing satisfactory conditions of service, and they must ensure that fair mechanisms exist to respond to members' concerns about their treatment. They must manage the personal expectations of members while fostering their commitment to serve through appropriate reward and recognition practices. Similarly, senior leaders must also try to balance the obligations of military service with the ability to accommodate basic individual needs.[58]

Although the RCAF received the lion's share of the 1950s' defence budgets, it was not unlimited and the service's leadership did have to work within the ceilings imposed by the Government. In particular, the RCAF brass had to ensure that it was able to attract people to the service (and keep them in the RCAF) to fulfil its personnel ceiling and also to make best use of the personnel that it had.

In endeavouring to accomplish these human resource goals, the RCAF leadership (as well as the RCN and Army brass) had to recognize early on that military personnel were all **volunteers in peacetime**. The 1950s were a different situation than that of the Second World War. During that conflict countless Canadians citizen soldiers, sailors and airmen flocked to the recruiting stations. They brought with them, as one RCAF narrative put it, "noble sentiments of patriotism which make acceptable the inconveniences of Service life such as restrictions on pay and advancement, dangerous work, separation from family or frequent moves, and so on." However, as the narrative notes further, "in peacetime servicemen are not solely patriots: they are employees."[59] As such, although patriotism and loyalty to the country are still significant factors for potential airmen, in times of peace the RCAF also needed to ensure that it had incentives to make a service career attractive to Canadian youths and professionals. Importantly, in the post-war economic boom of the 1950s, the RCAF had to compete with not only the other two Canadian services, but also well-paying and attractive jobs, benefits and job security in the civilian workforce. In particular, in the early 1950s there was a notable shortage of personnel in key trades due to the strong Canadian economy. Indeed, how to attract potential personnel to the Air Force who "constantly faced the prospect of greener grass outside the fence" was a constant dilemma that the RCAF leadership faced.[60]

The Government could only afford to raise salaries so much, so other measures and incentives were crucial. One measure was to recruit women into the RCAF, largely in less glamorous—yet nonetheless of key importance to the air defence mission—radar and fighter control operator positions.[61] In addition, during the 1950s the RCAF brass also implemented a number of measures to attract—and

retain—quality personnel. One of the key incentives was that those interested in making a career in the RCAF, as with other government agencies, received a good pension at the end of their service. The lure of the possibility of learning how to fly an aircraft was another, and it was sweetened by free training and the promise of $6,000 a year for an aircrew flying officer's pay and allowance, which, at that time, was a fairly generous sum. Increasing in rank and responsibilities as well as professional advancement were other incentives offered to potential airmen. There were also "fringe benefits," which included retirement and survivor plans, vacations with full pay, paid sick leave and health care benefits—all of which were comparable with existing benefits in civilian work at the time.[62]

Nonetheless, although attractive, most of these incentives were geared towards young men straight out of high school. Those with post-secondary education, be it at a community college or university, were much more difficult to attract. Such individuals were prime candidates for the RCAF's junior officer ranks and were also needed to fulfil technical positions in the Air Force to deal with the growing complexities of modern air defence equipment and platforms. As such, in 1952 the RCAF leadership introduced the Regular Officers Training Plan (ROTP) to attract them to the service. This programme included government subsidies for a young man to attend a Canadian university who would otherwise not be able to afford post-secondary education. The individual had the choice of either attending a civilian institution or one of the three military universities—the Royal Military College of Canada in Kingston, the Collège militaire royal at St. Jean or Royal Roads in Victoria. During the summer, a ROTP cadet trained with the RCAF and received a regular Service rate pay. At the end of his four years at university, the cadet received not only a bachelor's undergraduate degree but also a commission as qualified aircrew. In return, the new officer was guaranteed a minimum of 20 years of pensionable service and at the very least had to serve a minimum of three years with the Regular Force RCAF.[63]

As of 1958, only 13 percent of aircrew had a university degree, well below the desired 25 percent level. In addition, besides familiarity with the technical aspects of modern air warfare, the RCAF leadership also felt that university educated personnel would help the Air Force in the long run when it came to senior command and staff positions, as RCAF officers would be more "able to vie favourably with officers of other lists [i.e., from other services] with whom they compete after reaching the rank of group captain."[64] The hope of the ROTP programme was, therefore, to secure for the Air Force "a highly trained complement of officers who, in the future, will have the capacity to direct and conduct the air defence of Canada."[65] Offering and administering career opportunities in the Air Force—that were rewarding both financially and professionally—were therefore of vital concern for the RCAF leadership.[66]

Lastly, in addition to attracting new airmen to the RCAF, the Air Force brass also had to ensure that it took proper care of its existing personnel. Some of the "fringe benefits" of being in the Air Force have already been mentioned, but there were also other special programmes that had to be implemented in order to make service life as comfortable as possible for airmen. This was especially the case for RCAF Air Defence Command. ADC personnel were often posted to small and secluded unit locations throughout Canada, particularly the radar stations in the Arctic. These tours of duty were shorter, consisted of more transfers and had less security of tenure as well as less continuity of operation than other peacetime service appointments. Most important was the concern that these individuals had some kind of normalcy. Oftentimes, airmen found themselves away from family for a long period of time, and those who were fortunate enough to have their family with them did not always have "all the amenities and services one expects to find in the average progressive community."[67] Since these men were tasked to defend the Canadian way of life, the RCAF leadership sought to afford them—and their families—the opportunity to enjoy this kind of lifestyle. Indeed, taking care of the Air Force's people resources proved to be a vital institutional leadership role that the RCAF brass had to fulfil during the 1950s.

Getting a "Piece Of The Action"

Finally, one of the most important ways that the RCAF leadership safeguarded its air defence spending priority was to ensure that the service got a proverbial piece of the action when it came to the overall bilateral Canada-US continental air defence effort.[68] Key to this, of course, was the role of RCAF officers on the major Canada-US bilateral defence consultation and planning organizations. These included the Permanent Joint Board on Defence (PJBD), the Military Co-Operation Committee (MCC), the Canada-US Military Study Group (MSG) and RCAF ADC officers assigned to USAF Continental Air Defense Command (CONAD) Headquarters in Colorado Springs. Four individuals who in particular played crucial roles were Air Commodore Clare Annis, Vice-Chiefs of the Air Staff

Air Vice-Marshal Frank Miller and Air Vice-Marshal C. R. Dunlap and the Chief of the Air Staff during the mid-1950s, Air Marshal Roy Slemon. Each airman worked hard to safeguard RCAF interests, especially with regard to command and control, and at the same time were also key advocates of greater coordination and integration of Canada-US air defences. Annis, Miller, Dunlap and Slemon, therefore, played important roles in laying the groundwork for the eventual establishment of NORAD in 1957.[69]

Lastly, mention must also be made of the role of Air Marshal Slemon in ensuring that the RCAF got a piece of action in terms of continental air defence command and control. In addition to being a key advocate for air defence integration under one commander, the former RCAF Chief of the Air Staff also became the first officer to hold the position of Deputy Commander-in-Chief of NORAD when the command was established in September 1957.[70] Indeed, it was the Canadian Deputy who exercised NORAD operational control when the USAF Commander-in-Chief (CinC) was absent.[71] Air Marshal Roy Slemon's recollections of a discussion with his superior, General Earle Partridge, provide a good example. Partridge told him, "Roy, I'm supposed to be the Commander in Chief [sic] of NORAD and you're supposed to be the Deputy Commander in Chief. When I go out on a trip, inspecting units or go away to have a little fun, *you* have the responsibility and the authority."[72] This established a clear understanding of the relationship of the NORAD CinC and his Deputy, especially when the former was absent from headquarters. It was an understanding that continued with successive NORAD CinCs. As Slemon recalled of his relationship with Partridge's successor General Laurence Kuter, "he, unfortunately, was sick about a third of the time, in hospital and so on. So I was in the hot seat. But by General Partridge having taken this policy there was no problem, I just carried on."[73] Therefore, by fulfilling the institutional leadership function of advocating for a piece of the action, Slemon was able to secure for the RCAF a significant command position in NORAD and make an important contribution to the bilateral continental air defence mission.

Conclusion

The 1950s for the RCAF were indeed the service's Golden Years, when operations and expenditures for the service and its air defence role in particular were at their height. As James Eayrs has noted, the RCAF was "consistently able to attract the largest share of recruits" and "spirits were highest in the Air Force, and rose with the passing of the years."[74] However, with these advantages also came a number of challenges, especially in terms of responsibility and accountability, which put the institutional leadership functions of the RCAF's top officers to the test. During this time period, the RCAF leadership undertook a number of measures to safeguard its priority for funding and to provide advocacy for its air defence mission. This paper has discussed a few of them.

The need to raise the profile of the RCAF within the Canadian public, government and other services through visible means such as air shows but also talks and speeches proved to be quite effective in advancing the RCAF's air defence role. Professional development, both in the areas of training and education, and fostering intellectual air power discourse in *The RCAF Staff College Journal* and *The Roundel* were also key concerns that the Air Force's leadership did not take lightly. The necessity of the RCAF brass to gather together—oftentimes with the Minister of National Defence—to discuss matters of importance to the service was also recognized in the annual Air Officers' Commanding and Group Commanders Conferences, which also proved to be an effective way for the Air Force's leadership and its minister to get the pulse of the service and current air defence challenges. The RCAF brass also had to make difficult choices regarding priorities, both in terms of allocating air defence resources to protect the vital areas of the country as well as fighters and other systems (such as radars) that played a crucial role in the continent's air defence. In addition, the leaders of Canada's Air Force also had to be cognizant of the human resource aspect of their institutional leadership role by ensuring that it took care of its people by offering attractive employment, pay, benefits and incentives. Lastly, the RCAF ensured that it was able to get a piece of the action when it came to continental air defence by actively fostering and encouraging a close relationship with USAF, culminating in the formation of NORAD and the appointment of a senior RCAF officer as the Deputy CinC of the new bilateral air defence command.

These factors all helped the RCAF to further its air defence mission during the service's Golden Years. Nonetheless, this article has only scratched the surface regarding the RCAF's air defence institutional leadership during the 1950s. There is much more to be learned from these examples. More research on the history of air defence and air power advocacy in Canada is needed in order to provide insight on important lessons for today's Canadian Air Force. This article has been a start, and it is hoped that it will help encourage others to explore this and other important historical issues of interest to the Air Force.

Notes

1. James Eayrs, *In Defence of Canada Volume III: Peacemaking and Deterrence* (Toronto: University of Toronto Press, 1972), 58.

2. Ibid., 59; Jeff Noakes, "Air Force Architect: Air Marshal Wilfred Curtis, Chief of the Air Staff, 1947–1953," in *Warrior Chiefs: Perspectives on Senior Canadian Military Leaders*, eds. Lieutenant-Colonel Bernd Horn and Stephen Harris (Toronto: Dundurn Press, 2001), 247.

3. A-PA-005-000/AP-003, *Leadership in the Canadian Forces: Doctrine* (Kingston: Canadian Defence Academy/Canadian Forces Leadership Institute, 2005). Available online at http://www.cda-acd.forces.gc.ca/cfli-ilfc/lea/index-eng.asp (accessed May 27, 2009).

4. Ibid., 36. The manual further elaborates that "The CF cannot be caught unprepared. Consequently, senior leaders have no choice but to be agents of change. To ensure continuing readiness, they must have an in-depth understanding of the environment in which they operate and how it might look five, ten, and twenty years from now. They must have an accurate and reliable appreciation of security threats. They must be familiar with the nature and causes of the many social and military conflicts in which the CF may become involved. They must be knowledgeable about the workings of international alliances and keep abreast of advances in military technology. They must have a deep understanding of Canadian culture and values and maintain strong connections with society. And they must comprehend and work within, influencing where possible, Government's policies and priorities." Ibid., 36–7.

5. The "political" and "functional" designations are those of Joseph Jockel, one of the experts on Canada-US relations and continental air defence. Joseph Jockel, "Canada in NORAD, 1957-2007: A History" (presentation, Queen's Centre for International Relations National Security Seminar Series, January 24, 2007).

6. The somewhat short list includes: Colonel Randy Wakelam, Major Bert Fransden, Major Paul Johnston, Major Matt Joost, Major Bill March and Major Ray Stouffer.

7. Dr. Steve Harris (Senior Historian, DHH), email message to author, August 25, 2003.

8. Department of National Defence, Directorate of History and Heritage (hereafter DHH), Robert Lewis Raymont Fonds (DHH 73/1223). The archival staff at DHH have created an excellent and comprehensive finding aid for this collection.

9. Joseph T. Jockel, *Canada in NORAD 1957-2007: A History* (Montreal and Kingston: McGill-Queen's University Press in association with The Queen's Centre for International Relations and The Queen's Defence Management Program, 2007).

10. Brereton Greenhous and Hugh A. Halliday, *Canada's Air Forces 1914–1999* (Montreal: Art Global, 1999), 122.

11. Samuel Kostenuk and John Griffin, *RCAF Squadron Histories and Aircraft, 1924–1968* (Toronto: A. M. Hakkert Ltd, 1977), 144; D. J. Goodspeed, *The Armed Forces of Canada: A Century of Achievement* (Ottawa: Directorate of History, Canadian Forces Headquarters, 1967), 219; Major Mat Joost, "The RCAF Auxiliary and the Air Defence of North America, 1948 to 1960," in *Proceedings*, 7th Annual Air Force Historical Conference: Canada in NORAD, Colorado Springs, Colorado, United States, 4–8 June 2001 (Winnipeg: Office of Air Force Heritage & History, 2001), 27; Allan English and Colonel John Westrop (Retired), *Canadian Air Force Leadership and Command: The Human Dimension of Expeditionary Air Force Operations* (Trenton: Canadian Forces Aerospace Warfare Centre, 2007), 24 and 26. Available online at http://www.airforce.forces.gc.ca/cfawc/eLibrary/eLibrary_e.asp (accessed May 27, 2009).

12. Yefim Gordon and Vladimir Rigmant, *Tupolev Tu-4: Soviet Superfortress* (Hinkley, UK: Midland Publishing, 2002). See especially Chapter 1 "Presents from America." The Soviets were not in possession of the atomic bomb at this time.

13. Ann and John Tusa, *The Berlin Blockade* (Toronto: Hodder & Stoughton, 1988).

14. Appendix "A," Air Defence [hereafter Air Defence Appendix] to Joint Planning Committee (JPC) Study, "Summary of Joint Defence Capabilities," 16 September 1948, JPC Minutes to Meetings and Correspondence Volume 10, Joint Staff Fonds, DHH 2002/17, Box 55, File 4.

15. Ibid. For a stark assessment of the poor state of Canada's air defence capabilities, see JPC Report, "Canadian Air Defence Requirements," 14 July 1948, JPC Minutes to Meetings and Correspondence Volume 9, March to August 1948, DHH 2002/17, Box 55, File 3.

16. JPC Report 25-13, "Planning and Control of Joint Operations in Defence of Canada," 15 May 1950, Chiefs of Staff Committee, Organization, Defences Against Enemy Lodgements, DHH 2002/17, Box 111, File 6.

17. Library and Archives Canada (hereafter LAC), Manuscript Group (hereafter MG) B5, Brooke Claxton Fonds, Volume 221. Unpublished Memoirs of Brooke Claxton, 862-863; Wing Commander J. H. Roberts, AFC, "The RCAF's Functional Command Organization," *The Roundel* 4, no. 10 (November 1952): 20–3, copy at Canadian Warplane Heritage Museum, Hamilton, Ontario.

18. Andrew Richter, *Avoiding Armageddon: Canadian Military Strategy and Nuclear Weapons, 1950–63* (Vancouver: University of British Columbia Press, 2002), 17.

19. JPC Memo, "Command Boundaries – Canadian Services," 18 July 1947, JPC Minutes to Meetings and Correspondence Volume 7, DHH 2002/17, Box 55, File 1.

20. The RCAF did, however, hope "to retain the 'bomber technique' at staff levels." Minutes of a Conference of Air Officers' Commanding and Group Commanders held at Air Force Headquarters, Ottawa, 27–29 June 1949, Air Officers Commanding Conferences, Raymont Collection, DHH 73/1223/2000.

21. Kostenuk and Griffin, 145, 208; Air Marshal W. A. Curtis, Chief of the Air Staff, memorandum "Air Defence Group" to MND, June 21, 1950, LAC, (hereafter RG) 24, Acc. 1983-84/216, Box 3108, File HQS-895-100-69/14, Part 1. Quotes from latter.

22. The best account of the radar air defence system in the 1950s is Chapters Three and Four in Joseph Jockel, *No Boundaries Upstairs: Canada, the United States and the Origins of North American Air Defence, 1945-1958*, (Vancouver: University of British Columbia Press, 1987) and C. L. Grant, *The Development of Continental Air Defense to 1 September 1954*, USAF Historical Study No. 126 (Montgomery, Alabama: USAF Historical Division, Research Studies Institute, Air University, [1954]).

23. Air Vice-Marshal C. R. Dunlap took over as Air Officer Commanding (AOC) Air Defence Command upon its inception and was replaced shortly thereafter by Air Vice-Marshal A. L. James. G/C W. R. MacBrien was appointed the Chief Staff Officer of ADC. Joint Organization Order 14, 23 May 1951, LAC, RG 24, Acc. 1983-84/216, Box 3108, File HQS-895-100-69/14, Part 1; RCAF ADC history "for background information purposes," entitled "Air Defence Command," n.d. [likely August 1953], LAC, RG 24, Acc. 1983-84/216, Box 3108, File HQS-895-100-69/14, Part 5; Kostenuk and Griffin, 146, 208; Don Nicks, John Bradley and Chris Charland, *A History of the Air Defence of Canada 1948–1997* (Ottawa: Canadian Fighter Group, 1997), 9–10; English and Westrop, 26. Quote from first document.

24. A unified command is a command organization whereby a one overall commander (or CinC) is assigned operational command or operational control over the forces of assigned component commands. A unified command thus ensures a single chain of command, less duplication and overhead and operational efficiency. A good example is the recently-established Canadian unified commands (i.e., Canada Command) under CF Transformation.

25. Claxton Memorandum, "Acceleration of RCAF Programme," to Cabinet, July 19, 1950, LAC, MG 32, B5, Brooke Claxton Fonds, Volume 94, File Accelerated Defence Programme; Kostenuk and Griffin, 146, 208; English and Westrop, 26; Noakes, "Air Force Architect," 247.

26. Minutes of Conferences of Air Officers' Commanding and Group Commanders held at Air Force Headquarters, Ottawa, 20–21 March and 27–29 June 1949, Air Officers Commanding Conferences, Raymont Collection, DHH 73/1223/2000.

27. Ibid. This message of economy was repeated constantly during Air Officers' Commanding and Group Commanders conferences throughout the 1950s. See, for example, Minutes of Conferences of Air Officers' Commanding and Group Commanders, 5–7 November 1952 and 17–19 March 1959, Air Officers' Commanding Conferences, Raymont Collection, DHH 73/1223/2000.

28. Senior leaders must therefore, the manual continues, "have a thorough understanding of Canadian society and its institutions and must be able to explain the CF to the Government, central agencies, external organizations, and the Canadian people." *Leadership in the Canadian Forces*, 38–9.

29. Minutes of a Conference of Air Officers' Commanding and Group Commanders held at Air Force Headquarters, Ottawa, 27–29 June 1949, Air Officers Commanding Conferences, Raymont Collection, DHH 73/1223/2000.

30. For example, in 1952 there was a series of serious thefts that occurred in all three services. However, because the RCAF was more in the limelight at the time it meant greater negative publicity for the service. As Air Marshal Curtis explained to his fellow senior officers, "publicity in this regard always had an unfavourable reaction on the public because it appeared that the services were lax in their administration." Therefore, in addition to tighter security to counter these thefts, the CAS also "arranged that 'honesty' will be stressed during initial courses for all future entrants into the RCAF." Minutes of a Conference of Air Officers' Commanding and Group Commanders held at Air Force Headquarters, Ottawa, 5–7 November 1952, Air Officers Commanding Conferences, Raymont Collection, DHH 73/1223/2000.

31. Greenhous and Halliday, 138.

32. Air Commodore Clare L. Annis, *Airpower 1952: Three Speeches by Air Commodore Clare L. Annis*. Canadian Forces College Collection, Toronto; "The Significance to Air Defence of Some Recent Technical Trends" (address by Air Commodore C. L. Annis, Acting Air Officer Commanding, Air Defence Command, RCAF to the Montreal Air Force Veterans' Association, November 12, 1954). Copy at the Information Resource Centre, Canadian Forces College, Toronto (hereafter IRC CFC).

33. DHH 73/1501, *Nineteen Years of Air Defense*, NORAD Historical Reference Paper No. 11 (Colorado Springs: North American Air Defense Command, Ent Air Force Base, Colorado, 1965), 11–12; JCS 2084/19, Chairman, JCS, Memorandum, "Interception and Engagement of Identified Hostile Aircraft," to Secretary of Defense, 29 August 1950, United States National Archives and Records Administration, College Park, Maryland, RG 218, JCS, Geographic File, 1951-1953, Box 56, File CCS 373.24 U.S. (9-8-49), Section 3; Jockel, *No Boundaries Upstairs*, 50.

34. "The Role of the R.C.A.F." (address, Trenton Chamber of Commerce, March 26, 1952) in *Airpower 1952: Three Speeches by Air Commodore Clare L. Annis*. Part of the Canadian Forces College Collection.

35. "The Role of Air Power" (address by Air Commodore K. L. B. Hodson, OBE, DFC, CD, Canadian Army Staff College, Kingston, April 18, 1955). Copy in possession of the author courtesy of A/C Hodson's brother Ian. The author has also donated a copy of this speech to the IRC CFC and to the Canadian Forces Aerospace Warfare Centre in Trenton. This speech is published in *The Canadian Air Force Journal* Volume 2. no. 3 (Summer 2009) and is available online at http://www.airforce.forces.gc.ca/CFAWC/eLibrary/Journal/Vol2-2009/Iss3-Summer_e.asp.

36. The conclusion by Annis in one of his speeches is illustrative of the RCAF's requirement for large expenditures: "Air Force costs just can't be postponed until after the shooting starts. The main air force costs are capital costs; and the most effective air forces are those which are paid for in peacetime." From "The Role of the R.C.A.F." (address, Trenton Chamber of Commerce, March 26, 1952) in *Airpower 1952: Three Speeches by Air Commodore Clare L. Annis*. Part of the Canadian Forces College Collection.

37. *Leadership in the Canadian Forces*, 37.

38. Ibid., 37–8.

39. "Half-Way House: Training Staff Officers in the R.C.A.F.," *The Roundel* 3, no. 4 (March 1951): 3–17; Colonel William Lewis, "Leadership: The Air Dimension," *The Canadian Air Force Journal* 2, no. 1 (Winter 2009): 9. Available online at http://www.airforce.forces.gc.ca/CFAWC/eLibrary/Journal/Vol2-2009/Iss1-Winter_e.asp (accessed May 27, 2009). Quote from latter.

40. "Half-Way House."

41. Preamble to *The R.C.A.F. Staff College Journal*, Volume 1, 1956. The journal was published once a year and the Chairman of its Editorial Board was the Staff College's Commandant.

42. See, for example, the following: Bernard Brodie, "Implications of Nuclear Weapons in Total War," *The R.C.A.F. Staff College Journal*, Volume 2, 1957, 12–22; Dr. George R. Lindsey, senior operational research officer at ADC HQ, "When is Air Defence Worth While?," *The R.C.A.F. Staff College Journal*, Volume 1, 1956, 30-32. Copies of the *RCAF Staff College Journal* are available at the Canadian Forces College Information Resource Centre.

43. Group Captain M. Lipton, "The Wisdom of Our Air Defence Policy," *The R.C.A.F. Staff College Journal*, Volume 1, 1956, 28–32.

44. See, for example, Lieutenant-General Guy Simonds, "Where We've Gone Wrong on Defence," *Macleans* (23 June 1956): 22–3, 62–9.

45. In the article Lipton emphasizes the importance of **time**—to ensure that SAC bombers can get off the ground and the populations of Canada and the US to air raid shelters.

46. Lipton, 29.

47. Air Marshal W. A. Curtis, Chief of the Air Staff, "A Message from the CAS," *The Roundel* 1, no 1 (November 1948): 1.

48. See, for example, the following: "Air Defence" (address, Royal Empire Society by former RAF CAS Lord Tedder) and James Hay Stevens, "An Interceptor's Future," *The Roundel* 2, no. 9 (July-August 1950); "Northern Skytrails: The RCAF in the Arctic, 1927-1939," *The Roundel* 1, nos. 3, 4, 5, 6, 7, 8, & 9 (1949); S/L D. Gooderham, "So You're Going North?" and F/L. T. J. MacKinnon, "RCAF Station, Whitehorse," *The Roundel* 1, no. 10 (August 1949); G/C W. H. Patriarch, "The Strategy of the Arctic," *The Roundel* 2, no. 6 (April 1950); "J.E.F.," and "Russian Fighter Strength," *The Roundel* 1, no. 5 (March 1949); and the "Aircraft in the News" series from 1951 onwards, which gave particular attention to modern Soviet fighters and bombers.

49. Minutes of a Conference of Air Officers' Commanding and Group Commanders held at Air Force Headquarters, Ottawa, 27–29 June 1949, Air Officers Commanding Conferences, Raymont Collection, DHH 73/1223/2000.

50. Minutes of Conferences of Air Officers' Commanding and Group Commanders held at Air Force Headquarters, Ottawa, 27–29 June 1949, 17–18 January 1952, 5–7 November 1952, 17–19 March 1959, Air Officers' Commanding Conference, Raymont Collection, DHH 73/1223/2000; *Leadership in the Canadian Forces*, 38.

51. Canadian Air Force plans in 1950 called for an establishment of five fighter squadrons to be located at St. Hubert, Bagotville, Chatham, Trenton (interim) and Toronto to cover vital points in the Great Lakes-St. Lawrence area. This also included radar units at Chatham, Lac St. Joseph, Bagotville area, Pembroke area and Toronto area. In 1954, an additional CF100 squadron was assigned to Vancouver to defend the west coast, but no further interceptor aircraft were available for Atlantic Canada. Minutes of Conferences of Air Officers' Commanding and Group Commanders held at Air Force Headquarters, Ottawa, 20–21 March 1950 and 5–7 November 1952, Air Officers Commanding Conferences, Raymont Collection, DHH 73/1223/2000; Jockel, *No Boundaries Upstairs*, 92.

52. Lipton, 28–32; "The Role of Air Power" (address by Air Commodore K. L. B. Hodson); Memorandum from Under-Secretary of State for External Affairs to Secretary of State for External Affairs, 11 February 1955, Memorandum from Head, Defence Liaison (1) Division to Under-Secretary of State for External Affairs, 2 November 1955, and Minutes of a Meeting of the Cabinet Defence Committee, 8 November 1955, reproduced in Greg Donaghy, ed., *Documents on Canadian External Relations*, Volume 21, 1955 (Ottawa: Department of Foreign Affairs and International Trade, 1999), 703–4, 721–31.

53. Randall Wakelam, "Flights of Fancy: RCAF Fighter Procurement 1945–1954" (MA thesis, Royal Military College of Canada, 1997), i.

54. This was a particularly touchy point with regard to the defence of Newfoundland and, in particular, the US bases there. Richard Goette, "Command and Control of Air Defence Forces in Newfoundland: The RCAF and U.S. Northeast Command" (paper, 19th Military History Colloquium, Laurier Centre for Military Strategic and Disarmament Studies, University of Waterloo 1–3 May 2008). See also DHH 73/1223/2000, Raymont Collection Minutes of the 17-18 January 1952 Air Officers' Commanding Conference.

55. For further discussion of RCAF fighter procurement see the following: Wakelam; Sandy Babcock, "Air Marshal Roy Slemon: The RCAF's Original," in *Warrior Chiefs*, 271; Eayrs, 104–5, 123; Craig Stewart, *Shutting Down the National Dream – A. V. Roe and the Tragedy of the Avro Arrow* (Toronto: McGraw-Hill Ryerson, 1988).

56. Minutes of a Conference of Air Officers' Commanding and Group Commanders held at Air Force Headquarters, Ottawa, 5–7 November 1952, Air Officers Commanding Conferences, Raymont Collection, DHH 73/1223/2000; Jockel, *No Boundaries Upstairs*, Chapters 3 & 4.

57. See, for example, Jeffrey David Noakes, "Defence Construction (1951) Limited and Military Infrastructure in Canada, 1950–1960" (PhD thesis, Carleton University, 2006) and also the ongoing academic historical work on the DEW line by Dr. P. Whitney Lackenbauer available online at: http://www.lackenbauer.ca/DEWLine/ (accessed May 27, 2009).

58. *Leadership in the Canadian Forces*, 39. Emphasis in original.

59. DHH 74/649, "The Air Defence of Canada," by F/O L. R. N. Ashley, PhD, 87.

60. Minutes of Conferences of Air Officers' Commanding and Group Commanders held at Air Force Headquarters, Ottawa, 17–18 January and 5–7 November 1952, Air Officers Commanding Conferences, Raymont Collection, DHH 73/1223/2000; "The Air Defence of Canada," 87. Quote from latter.

61. "The Air Defence of Canada," 110–1; Minutes of a Conference of Air Officers' Commanding and Group Commanders held at Air Force Headquarters, Ottawa, 17–18 January 1952, Air Officers Commanding Conferences, Raymont Collection, DHH 73/1223/2000. See also Barbara Dundas, *A History of Women in the Canadian Military* (Montreal: Art Global, 2000) for a more detailed examination of women in the Air Force. Both the topics of women in the post-war RCAF and the role that radar and fighter control operators played in the Canadian air defence system remain largely unexplored in the historiography of the RCAF.

62. "The Air Defence of Canada," 87–8, 93.

63. Minutes of a Conference of Air Officers' Commanding and Group Commanders held at Air Force Headquarters, Ottawa, 5–7 November 1952, Air Officers Commanding Conferences, Raymont Collection, DHH 73/1223/2000; "The Air Defence of Canada," 88–90, 92. Unfortunately, despite the success of the ROTP programme in attracting new personnel, the majority of the new officers returned to civilian life after their three years of service ended.

64. "The Air Defence of Canada," 90-91.

65. Ibid., 90.

66. Ibid. In addition, in light of fewer opportunities for promotion in the future, another measure that the RCAF leadership considered in 1956 was a "system of tradesman's pay or longevity pay for airmen as a means of making the service career more attractive." Decisions and Subjects Requiring Action Raised at the Air Members and AOsC Conference, 13–17 February 1956, Air Officers Commanding Conferences, Raymont Collection, DHH 73/1223/2000.

67. "The Air Defence of Canada," 97.

68. For an excellent discussion on the "piece of the action" concept see P. Whitney Lackenbauer, "From 'Defence Against Help' to 'A Piece of the Action': The Canadian Sovereignty and Security Paradox Revisited," Centre for Military and Strategic Studies (CMSS), University of Calgary, Occasional Paper No. 1, May 2000.

69. This information has been gleaned from two chapters of my forthcoming Queen's University PhD dissertation, entitled "Who is in Charge Here? Canada, the United States and the Command and Control of Air Forces for Continental Defence from Ogdensburg to NORAD, 1940–1957."

70. Jockel, *No Boundaries Upstairs*, 109.

71. North American Air Defense Command (NORAD) Proposed Mission and Terms of Reference, 8 October 1957, Raymont Papers, DHH 73/1223/85; Revised Terms of Reference for the Commander in Chief, North American Air Defense Command, n.d. [likely early January 1958], Raymont Collection, DHH 73/1223/86. This commander-deputy commander relationship in NORAD continues to this day. See "Agreement Between the Government of Canada and the Government of the United States of America on the North American Aerospace Defense Command," April 28, 2006, available online from Canada Treaty Information at: http://www.treaty-accord.gc.ca/ViewTreaty.asp?Language=0&Treaty_ID=105060 (accessed February 7, 2007).

72. DHH 79/128, Interview with Air Marshal Roy Slemon by W. A. B. Douglas and William McAndrew, October 20, 1978, 18. Emphasis added.

73. Ibid.

74. Eayrs, 122.

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Chapter 6

Air Chief Marshal Frank Miller: A Civilian and Military Leader

Raymond Stouffer

Introduction

On Thursday, April 28, 1960, the *Ottawa Citizen* wrote that Frank Miller, the ex-Air Marshal and, more recently, the Deputy Minister (DM) of National Defence, had become the Diefenbaker's Government choice as Chairman of the Chiefs of Staff Committee (COSC), replacing General Charles Foulkes. Miller's twenty-four years service in the Royal Canadian Air Force (RCAF) "[had] given him a valuable store of knowledge of all aspects of defence."[1] As DM, Miller was "hailed as one of the keenest and most incisive minds in the Defence Department."[2] In the same article, it was implied that changes were necessary in Canada's military that demanded Miller's experience, management skills and leadership. Miller was "believed one of the very few men suited to take Canada's military element through the ultimate transformation to a unified force."[3] Frank Miller's return to uniform therefore came with solid credentials and high expectations. He was to become Canada's highest ranking military officer. But few Canadians knew him at the time and fewer still today.

The purpose of this paper is, in part, to bring to light the public life of Frank Miller to better understand who he was and why he was chosen as Foulkes's replacement. The reality that such an exercise has not been done previously says much about the lack of scholarly interest in the cold war RCAF generally and the dearth of biographies of senior Canadian airmen specifically. As remarkable as Miller's career is the fact that it is today largely unknown and therefore unappreciated. Comprehending Miller's military and civilian service not only tells us why he was selected as Chairman of the COSC, it also addresses the larger question of military leadership in peacetime. It is proposed that those responsible for Miller's selection felt that he possessed the requisite leadership capabilities and understanding of the needs of a peacetime military better than his peers.

To support this argument, this paper focuses on two aspects of Frank Miller's career. First, his ascendancy through the ranks and increasing senior appointments will be described in the context of the evolution of a peacetime and wartime RCAF. Second, Miller's professional accomplishments will be compared to those of two other successful senior officers and contemporaries, Roy Slemon and Charles Foulkes. Slemon was four years older than Miller and joined the RCAF earlier. These two airmen shared similar flying and command postings for over three decades. Their mercurial rise in the wartime and postwar RCAF made them professional rivals. Slemon would get the nod and become Chief of the Air Staff (CAS) in 1953. Seven years later Miller would reach higher rank as Chairman of the COSC and Chief of the Defence Staff (CDS).

One historian has argued that Charles Foulkes understood better than his competitors that military leadership in the peacetime cold war required special skill sets. Foulkes was sensitive to the reality that the existence of expensive peacetime forces-in-being challenged Canadian governments that had to balance domestic and international political interests.[4] This paper will argue that Frank Miller was as good as, if not better than his predecessor in meeting the challenges of leading a Canadian peacetime military during the early cold war. Miller's military and civilian careers not only distinguished him from his peers, but from Foulkes as well. Frank Miller, not Charles Foulkes, was deemed the best military leader to guide the Canadian military through the turbulent years of integration and unification.

Life in the RCAF – Part One

One major challenge writing about Frank Miller is working with scarce sources. Mainly due to the fact that Miller did not keep a personal diary, there are few primary sources available describing Frank Miller's professional career, and fewer still that mention his early life. Secondary sources are of little help. Fortunately, sufficient evidence exists from which a reasonable picture emerges.

Frank Miller was born in Kamloops, British Columbia, April 30, 1908. He attended Kamloops Public and High Schools. From 1925-31 he completed a Bachelor of Science degree in civil engineering at the University of Alberta. During his university years in Edmonton, Miller was a member of the Canadian Officer Training Corps.[5] Upon graduation Miller wanted to be a pilot. Like Roy Slemon a few years earlier, Miller was accepted into the RCAF because interwar air planners "considered an

engineering degree an essential qualification to be a pilot."[6] Further, they both had demonstrated their desire to be in the military as members of the Canadian Officer Training Corps.

Frank Miller was commissioned in the RCAF Regular Force on September 15, 1931. The following month Pilot Officer Miller was posted to No. 1 Squadron at Camp Borden, Ontario. By December 1931 he had obtained his pilot's wings after completing a series of flying training courses. On December 16 he was promoted to flying officer.[7] Although Frank Miller joined the RCAF because he wanted to fly, he appreciated neither the national scope of the Service nor its nascent military capabilities. Prior to enlistment he had the impression that the RCAF was limited to carrying out non-military roles. He expected to be assisting other government departments in activities such as aerial mapping, fire-fighting as well as communication and transportation flights.[8] For the most part, Miller's preconceptions about the interwar RCAF were correct. His own experiences would confirm that for much of the interwar period Canadian airmen were "bush pilots in uniform." Miller was nevertheless impressed by the range of air power roles practiced by the RCAF in the early 1930s.

Unfortunately for Frank Miller and his Air Force contemporaries they joined the RCAF just when the Great Depression set in. Desperate to fund relief programmes, the Bennett Government slashed the military budget in 1932. The RCAF was forced to make drastic cuts in personnel. As Miller recalled: "The earth fell in … I was kicked out [of the RCAF]!"[9] Luckily for Miller his temporary "leave" from the Air Force was short-lived. In July 1932 he was employed at Air Force Headquarters (AFHQ) in Ottawa. In January 1933 he was back at Borden to continue his flying training. This time it was at the School of Army Cooperation.

Frank Miller was one of the lucky few to have had the opportunity to continue his training during these years of the "Big Cut." In the period 1932-33, the RCAF saw its personnel strength drop from 906 officers and men to 694. The budget was cut by over a million dollars from the pre-Depression years to $1,405,000. As Miller himself experienced, airmen were released and pilot training was drastically curtailed. In some instances, flying training came to a complete stop. Further, RCAF expansion was impossible due to lack of funds for base construction, operational and training flights as well as new aircraft purchases.[10] Budget cuts also forced a reduction in professional development for the more experienced personnel. This training was expensive. The only staff courses available for senior Canadian airmen to learn the latest in air power theory as well as command and staff duties were taught overseas by the Royal Air Force.[11]

Although flying activity at Camp Borden was severely cut back at the time, Flying Officer Miller was able to complete his army cooperation course from February 1 to May 31, 1933. He logged thirty-four hours on the Avro 621 Tutor and a single hour on one the RCAF's three Consolidated O-17 Courier aircraft. This course was clearly designed to train RCAF pilots how to operate with the army. He was taught aerial photography, map reading, air reconnaissance, artillery observation and Morse code.[12]

Devoting precious training time supporting the army was anathema to Canadian airmen who closely followed air power developments in Britain. Royal Air Force (RAF) doctrine was based on the primacy of strategic bombing. Support to surface forces was not a priority. Unfortunately for the RCAF, it was not in a position to put this theory into effect. Until 1938 it remained subordinate to the Chief of the Army General Staff (CGS). Senior army officers wanted aviation controlled at division and corps level as was the case in the First World War. The demands of the Canadian Army aside, the reality of the Depression RCAF was being content conducting any type of operational training given the limited number of aircraft and pilots on strength.

For the remainder of 1933, Flying Officer Miller continued his flying training at Borden and Ottawa, Ontario. He successfully completed his Instrument Flying Course at Borden during the month of June. Flying the de Havilland (D.H.) 60 Gipsy Moth, predecessor to the ubiquitous wartime trainer, D.H. 62 Tiger Moth, Miller was given an overall course rating of "very good" by his instructor, Squadron Leader R.S. Grandy. According to Grandy, Miller made excellent progress on the course and had no major faults. During the month of July Miller attended the Seaplane Conversion Course at RCAF Ottawa (Rockcliffe) where he flew the D.H. 60 Floatplane and the Vickers Vedette. From August 1 to December 22, 1933, Flying Officer Miller was back in Borden to take the Squadron Armament Officers' Course at the Air Armament and Bomber School. This course allowed him to log more flying time on a variety of RCAF aircraft including the Fairchild 71, the Courier, the Armstrong Whitworth Siskin

and the Gypsy Moth. Remarkably therefore, during a year in which most flying activities had come to a standstill in the RCAF, Frank Miller was somehow able to complete four full flying courses![13]

Within the financial restrictions of the Depression years, the RCAF Permanent Force maintained a tenuous national presence and semblance of flying activity. On the West Coast the RCAF operated out of RCAF Station Vancouver, home to No. 4 Flying Boat Squadron and two mobile detachments. Flying Officer Miller was posted there in January 1934 to begin his first operational tour. In addition to his primary duty as a squadron pilot, he was made unit adjutant.[14] In 1934 the "clouds of war" in Europe were still several years away. As such, No. 4 (FB) Squadron continued to perform non-military functions in support of other federal and provincial departments. Miller and his fellow squadron pilots flew Vedette, Vancouver and Fairchild flying boats on anti-smuggling and aerial photography missions.[15]

In 1935 the career paths of Frank Miller and Roy Slemon would meet for the first time. Between 1933 and 1938 Slemon was employed in Borden as a flight instructor and staff officer in RCAF Headquarters.[16] In April 1935 Flight Lieutenant Slemon was Miller's instructor on the Air Pilotage Course. He rated Miller as "above average." Later that June, Miller successfully completed the Flying Instructor Course. He was rated as an "excellent student" by no less than Squadron Leader G.E. Brookes, future Air Officer Commanding, No. 6 (RCAF) Group.[17]

Between 1935 and 1938 Frank Miller filled various billets as a flight and air navigation instructor. Miller was promoted to the rank of flight lieutenant April 1, 1937 – presumably, no "April Fools Joke"! The next month he moved from the Flying Training School in Borden to the Air Navigation and Seaplane School at Trenton. In September 1938 his training took him to Britain. The RCAF posted Miller to the School of Air Navigation, RAF Manston, to attend the Specialist Air Navigation Course.[18] Prior to his departure, Frank Miller got married to Dorothy Virginia Minor on May 3, 1938. The wedding took place in Galveston, Texas.[19]

When Flight Lieutenant Miller went overseas in the fall of 1938 there were genuine fears of war. Although Prime Minister Mackenzie King privately accepted the reality that Canada would come to Britain's side if war was declared against Nazi Germany, the Defence Department was limited to planning for continental defence. Politics aside, Canadian defence planners, including the RCAF, could not ignore the likelihood of another war in Europe. A major challenge was to bring the small peacetime Canadian military to a wartime footing. To do so, defence planners had to identify those sailors, soldiers and airmen that had demonstrated superior professional and leadership skills to lead such an expansion.[20] Frank Miller was one such airman.

If the Canadian military recognized the need to expand to a wartime military, it did not have the means with which to accomplish this goal during the immediate years preceding the Second World War. Lacking sufficient resources in Canada, the RCAF had to send selected airmen to Britain to receive specialist training from the RAF.[21] Flight Lieutenant Miller was sent to Britain because by this time his superior airmanship had come to the attention of his Air Force superiors. Miller had also proven leadership potential superior to that of his peers. On April 1, 1939, he was promoted to the senior officer rank of squadron leader.[22] Upon completion of the course, the RCAF expected Miller to return to Canada with advance knowledge of air navigation. More importantly, senior air force leaders counted on Miller commanding air navigation schools as part of an expanding air training programme.

When Canada declared war against Germany September 10, 1939, the RCAF recalled Squadron Leader Miller. The plan was indeed for Miller to lead a training school as part of the expected wartime expansion plan.[23] Little did the RCAF know that this plan was about to get much bigger. By the end of September, the King Government was deliberating the details of its immediate commitment to Britain and her Commonwealth allies. The British were shocked that King's immediate offer was but one infantry division. Ottawa was then asked if Canada would support a Commonwealth air training programme as part of the British Empire Air Training Scheme.

After several months of acrimonious negotiations, the King Government agreed to commit significant financial, material and personnel resources to the creation of such a major national undertaking.[24] The understanding was that the organization and operation of the British Commonwealth Air Training Plan (BCATP) was to be Canada's main contribution to the development of Commonwealth air power. In fact King's acceptance to run the BATCP was predicated on his belief that it would substitute for providing substantial military forces to the war effort. In any event,

this would not prove the case. Whatever King's motivation, to the miniscule RCAF this national responsibility represented "a challenge of great magnitude."[25] Air Vice Marshal Croil, Chief of the Air Staff, equated establishing and operating the BCATP "equivalent of maintaining 50 squadrons in the field."[26] Before the war the RCAF was hard pressed to train 125 pilots a year. It was now asked to train 540 pilots, 340 observers and 580 wireless operators / air gunners every four months! Fortunately for the RCAF, it had experience from the previous war in training allied aircrew. Equally important, it had seasoned and proven leaders like Frank Miller who would make this air training scheme work.

Even before the final details of the BCATP were signed on Mackenzie King's birthday, December 17, 1939, sites for the training schools were being selected and surveyed. Further, contracts for flying training and logistical needs were let. By far the largest need was for civilian and military flying instructors. Many of the young RCAF pilots who had counted on going overseas to fly in combat were disappointed when they were told that they were to remain in Canada as instructors.[27] Squadron Leader Miller was too busy to be concerned about operational flying opportunities. Just as the Anglo-Canadian negotiations for the air training scheme began Miller was appointed Officer Commanding (OC) of the Air Navigation and Reconnaissance School located at Trenton.[28] This would be the first of several important postings in which he commanded specialist training schools within the BCATP. In all instances, Miller's performance evaluations were consistently rated as outstanding. Moreover, he would be recommended by several prominent senior RCAF officers for accelerated promotion ahead of his peers.

While at the Air Navigation and Reconnaissance School, Miller's superiors included the two future Air Officers Commanding of No. 6 (RCAF) Group, Group Captains G.E. Brookes and C.M. McEwen. In January 1940 McEwen wrote that Miller was reliable, tactful and energetic and that he demonstrated good judgement and common sense. He added that Miller was especially well qualified in his duties and an excellent leader. In September 1940 Brookes wrote that Miller was mature in judgement and had shown much initiative in meeting the many problems of his school during the early months of operation. Brookes added that Miller demonstrated exemplary conduct and was recommended for accelerated promotion.[29]

In November 1940, No.1 Air Navigation School (ANS) was relocated to Rivers, Manitoba. Within a month of moving to the school's new location, Miller once more impressed his superiors. Group Captain Sully, future Air Member for Personnel in AFHQ, noted that Miller did splendid work under difficult conditions as OC of No.1 ANS. Sully recommended Miller for accelerated promotion to acting wing commander. This recommendation was strongly supported by Air Commodore Shearer. Frank Miller clearly proved himself a most capable officer leading No.1 ANS through the tough beginnings of the BCATP. Miller was indeed promoted to wing commander in December 1940 and six months later was posted as OC of No. 2 ANS located in Pennfield Ridge, New Brunswick.[30]

Miller's year at Pennfield Ridge proved as successful as his previous tours at Rivers and Trenton. Group Captain Costello wrote that with regards to both training and administration, Miller organized and commanded Pennfield Ridge in a very efficient manner. Costello's recommendation for Miller's accelerated promotion to group captain was endorsed by Air Vice Marshal A.A.L. Cuffe, Air Member for Training. In May 1942 Miller was posted back to Rivers as OC of No.1 Central Navigation School. He then paid the price for success once more as he was promoted to acting group captain two months later and was sent east to Summerside, P.E.I. as Commanding Officer of the newly created No.1 General Reconnaissance School (GRS).[31]

Although Miller would only spend six months at Summerside he was able to bring No.1 GRS to a high standard of training during this period. In January 1943 Air Vice Marshal Cuffe remarked in his assessment of Group Captain Miller that he was highly intelligent and possessed a pleasing personality. He added that Miller's high standards of efficiency were reflected in the excellent condition of the training school. In their evaluation the following month, two more rising stars in the RCAF, Air Commodore Morfee and Air Vice Marshal G.O. Johnson, stated that Group Captain Miller had done an excellent job as Commanding Officer of No.1 GRS. They also wrote that Miller deserved credit for the high quality of training and efficient administration of the station.[32] In the spring of 1943 Miller's superiors concluded that his excellent work to date in the BCATP had prepared him for duties in higher headquarters. Group Captain Miller was therefore posted to Air Force Headquarters in Ottawa as Director of Training Plans and Requirements.[33]

Miller was employed at AFHQ from January 1943 to April 1944. During this period he was promoted to Acting Air Commodore; he finished his headquarters tour as Director of Air Training and Deputy Member for Training. Reflecting back over the previous four years, Miller's accomplishments as a leader of BCATP training establishments solidified his reputation as an outstanding air force officer. By the time he worked at AFHQ he was one of the most senior airmen overseeing the air training scheme at the height of its operation. However, by the early spring of 1944, the BCATP was about to wind down. Victory was in sight and the RCAF needed the talents of airmen like Frank Miller overseas to fill command positions. In April 1944, Miller was posted to No.6 (RCAF) Group Headquarters, located at Allerton Hall, Yorkshire. To do so, he relinquished his rank as Acting Air Commodore.[34]

Between April and June 1944, Group Captain Miller "learned the ropes" of the myriad of staff work associated with leading Canadian bomber operations. During this period Miller would once more work with Roy Slemon. The latter had served as the Senior Air Staff Officer in No. 6 (RCAF) Group Headquarters since its inception in January 1943. Having been the right hand man for Air Vice Marshals Brookes and McEwen, Air Commodore Slemon's experience proved invaluable to his protégée Frank Miller.[35]

In the summer of 1944, Miller received his first command of an operational bomber unit, RCAF Station Skipton-on-Swale.[36] For security reasons Miller's rank and position "officially" barred him from flying combat missions. However, what little evidence there is detailing his tours in 6 Group suggests that he showed marked concern for his subordinates. His challenge was to lead and encourage his aircrews confronted with poor odds of surviving their bomber tours. He met his crews upon their return and was actively involved in their debriefing.[37] Further, a close review of the war diaries of 424 and 433 Squadrons reveals that Group Captain Miller "flew" on a mission over the Falaise area of Normandy on July 17, 1944. Tactical bombing from medium altitude was an uncommon and dangerous procedure for bomber crews,[38] but he wanted to get a first-hand look at how his crews were supporting the allied advance in France.

Miller's first operational command impressed his superiors. Air Vice Marshal McEwen wrote in August 1944 that Miller was a good organizer and had a solid grasp of human nature. He added that Miller was untiring in his efforts with the operational functioning of his station.[39] On October 14, 1944 he was promoted, once again, to Air Commodore and appointed Commanding Officer of No.61 Base, located at Topcliffe.

By the spring of 1945 Frank Miller had become a respected and experienced wartime station commander in 6 Group. During this period he also commanded RCAF Base No. 63, Leeming, Yorkshire. Up to the challenge, Miller was able to maintain the Leeming squadrons' sortie rates in the face of changing aircraft types, aircrew conversion training and personnel rotations. Noteworthy was his appointment as Roy Slemon's deputy in command of the RCAF Tiger Force in July 1945. This unit was to be Canada's commitment to a Commonwealth bomber force operating with the Americans against Imperial Japan. However, with the surrender of Japan later that summer, plans for the force were cancelled and Miller was repatriated to Canada in September 1945.[40]

Wartime demobilization was swift and dramatic. From a wartime peak of over one million men and women in uniform, the King Government slashed the size of its postwar military to less than fifty thousand all ranks. The prime minister and his closest advisors understood, however, that geostrategic realities prevented a return to a paltry peacetime force that existed before the war. The new threat to world peace was a belligerent Soviet Union. Armed with long-range bombers and, after September 1949, atomic weapons, the Soviets threatened continental North America. Ottawa could neither ignore this threat nor the reality that it had to move closer to the United States (US) to jointly defend the continent from strategic attack. Canada therefore joined the US in establishing the North American Air Defense Command (NORAD). Prior to this unprecedented peacetime commitment, Canada became a member of the North Atlantic Treaty Organization (NATO). The Soviet threat extended to all of Western Europe as well as North America. Again departing from tradition, the Canadian government created large regular forces-in-being. In the new nuclear age the Western alliance underpinned its offensive and defensive strategies on air power. By the early 1950s the RCAF would therefore become the fastest growing and most important of the three Services.[41]

Remarkably, Air Commodore Miller's career never slowed down during this transitory period. He was clearly being groomed as a leader in the postwar RCAF. With flying mostly limited to

aerial mapping and communications during the period 1945–48, Miller was posted to Air Materiel Command; first as Chief Staff Officer, and then in June 1946, as the Air Officer Commanding. Between August 1948 and September 1949, he attended the US National War College.[42] The friendships and contacts Miller made with fellow American and NATO students were most opportune and greatly benefitted the RCAF in its future relations with alliance members. In the fall of 1949 Miller was posted to AFHQ as Air Member Operations and Training. Two years later he was promoted to the rank of Air Vice Marshal and became Air Marshal Curtis's Vice Chief of the Air Staff. An important role was serving as the Canadian Air Representative on the Canada-US Permanent Joint Board on Defence. In this regard, the CAS credited Miller as having made an outstanding contribution in the field of Canadian-US military relations.[43] At a time when cooperation between the RCAF and the United States Air Force (USAF) was increasing rapidly, Miller was the most senior RCAF contact with the USAF in terms of both discussing common doctrine and equipment purchases and planning for the air defence of North America.

It is not clear if Miller expected to replace Curtis as Chief of the Air Staff. Existing records suggest that the CAS had been grooming Roy Slemon, who indeed replaced him in January 1953; this conclusion is supported by the fact that Curtis had been in the job since 1947. The implication is that Defence Minister Claxton allowed Curtis the extra time as CAS so that Slemon could get more experience.[44] Frank Miller had to concede this coveted appointment to his old friend and competitor. Yet the following year, Air Marshal Slemon provided Miller a great career opportunity. He arranged with General Foulkes to have Miller posted to Supreme Headquarters Allied Powers Europe as General Lauris Norstad's Vice Deputy Air.[45] The RCAF insisted that allocating such a prestigious air staff position was appropriate given Canada's contribution of an air division of twelve fighter squadrons in NATO's central area. Frank Miller did not become CAS, but he became Canada's highest ranking airman in NATO.

On June 14, 1954, Defence Minister Claxton used the occasion of the visit to Ottawa of General Gruenther, Supreme Allied Commander Central Europe (SACEUR), to announce Miller's new appointment. Although there was an embarrassing moment when Claxton erroneously announced that Miller was to be immediately promoted to Air Marshal, the occasion was an important one for the RCAF generally and for Miller personally. In part General Gruenther had come to Ottawa to convince defence officials of the importance of collective defence in the West and the need for Canada to continue its support. SACEUR emphasized that air power had become the dominant factor in defence planning and he thanked his Canadian hosts for its increasing participation in this field. It was therefore most appropriate to have a highly recommended airmen like Frank Miller join NATO's senior staff.[46]

A year after his appointment was announced, Frank Miller was promoted to Air Marshal. He therefore joined Roy Slemon as the most senior airmen during a period that became the "Golden Years" of the RCAF. In addition to the twelve Sabre-equipped fighter squadrons in Europe, the RCAF had nine regular force air defence squadrons at home equipped with the Canadian made, all-weather CF100. By 1955 the RCAF was allocated more of the defence budget than the Royal Canadian Navy (RCN) and Canadian Army combined. That same year the RCAF's strength of 51,000 exceeded that of the Canadian Army. 1955 would also be a momentous one for Frank Miller. While attending a NATO meeting in Paris that year, Prime Minister St Laurent, accompanied by the Deputy Minister of National Defence, Bud Drury, paid Air Marshal Miller a visit. To an astonished Miller, the Prime Minister wanted him to return to Canada and replace Drury as DM.[47]

Frank Miller the Senior Bureaucrat

So how did it come about that the Prime Minister wanted an active serving airman to be DM of the Defence Department? Miller recalled years later he sent a message to the Prime Minister asking him to reconsider. Miller stated that as far as he knew, the job was for a civilian, not a military man because the DM represented the civilian employees of the Department. Drury, unhappy being replaced, agreed with him. But Drury's superiors made it clear that Miller was not being "invited, but told to be his replacement."[48] Prior to taking the job six years earlier, Drury came from a similar background as Miller. He was a graduate of the Royal Military College and had risen to the rank of brigadier during the war. So there was no negative reaction by senior public servants to Miller's appointment as DM. The ex-Brigadier Drury had already set the precedent and had been well received in the Department. He reluctantly relinquished the job to Miller, and then only because of personal family reasons.[49]

As Deputy Minister, Frank Miller's responsibilities changed dramatically in scope and kind. Although primarily responsible for managing departmental civilians and coordinating the Defence Department budget, his influence in the pre-integration and unification Canadian military was pervasive. The power structure was the myriad of senior committees.[50] Miller sat on all of them. He was a member of the Defence Council, the Chiefs of Staff Committee and the Defence Research Board. In the absence of the Defence Minister, Miller sat in on meetings of the Cabinet Defence Committee, and on occasion, in Cabinet. He rarely saw St Laurent and Diefenbaker, but he had extensive contacts with his immediate bosses, Ralph Campney and George Pearkes. He also recalled getting along well with Charles Foulkes.[51]

The evidence suggests that Miller faced two major challenges. One was his desire to better integrate the civilian and military chains of command. The other was the need to change the overall structure of the Defence Department. He made some headway towards solving the first problem. Although civilian employees were guided by separate regulations, they became better integrated into the military operational chain. Little progress was made in the matter of defence structure. Here, to some extent, Miller shared the frustrations of Foulkes. From their experiences in the COSC, they understood that until such time as the right of the Service Chiefs to see the Minister directly was removed, there would continue to be inefficiency in the management of the Department. Having spent five unsuccessful years trying to get the Service Chiefs to better coordinate and rationalize their programme demands, Miller knew that change was necessary if the Department was to meet its assigned defence tasks. However, internal changes were not the only answer. Miller indeed faced inter-Service animosity. He also had to deal with a parsimonious Treasury Board insensitive to the reality that a steadily decreasing defence budget was a larger concern than departmental inefficiency.[52]

If Miller recollected that he got along well with General Foulkes, minutes to COSC meetings suggest that they did not always agree. Interesting is their differences were not limited to the subjects of defence estimates and civilian personnel, traditional responsibilities of the DM. They also disagreed on operational questions. Miller held strong views on a range of strategic policy matters. He made recommendations regarding the use and storage of nuclear weapons, promoted disarmament talks and commented on strategic military intelligence assessments. It is understandable therefore that Miller and Foulkes did not have the same opinion on such a range of subjects. That said, Miller deferred to the Chairman's authority at these meetings.[53] Moreover, on a private basis and in other committees like Defence Council, Miller and Foulkes "had a very good relationship [and] worked closely with [each other]."[54]

Miller's frustrations with the Service Chiefs notwithstanding, for the most part he had a good professional relationship with them. This included working with his old friend and rival, Roy Slemon. They cooperated well and were united in their defence of the ill-fated CF105 Arrow programme and the need for a joint Canada-US air defence command.[55] With the creation of NORAD in 1957 Slemon was appointed Deputy Commander; another prestigious career assignment. More importantly as far as the Diefenbaker government was concerned, Frank Miller's close ties with the US defence establishment facilitated the successful signing of the Development and Defence Production Sharing agreement with the Americans. To the Conservatives, NORAD meant integrated defence production as well as integrated continental air defence.[56]

Miller's extensive contacts with the USAF also benefitted Canada's major equipment purchases and systems upgrades, including CF104 Starfighters, BOMARC Missiles and CF101 Voodoos. Miller also oversaw the funding and contracting of such high cost weapons platforms. It was therefore not surprising that Miller often commented on RCAF operational policy during meetings of the COSC.[57] This may not have pleased Hugh Campbell, the CAS; however, the associated infrastructure, logistics and personnel costs were Miller's concern as DM. Moreover, Miller more often than not supported the interests of the RCAF.[58] Finally, as DM, he was in a better position than CAS to appreciate the need to rationalize RCAF demands with those of the other Services.

Frank Miller may not have wanted the job as Deputy Minister, but once committed, he performed his duties as exceptionally as was the case in his previous service career. This is not to say that he could do the job alone. To assist him in the civilian side of the Department, he leaned heavily on Elgin Armstrong. This had two positive outcomes. First, Armstrong's extensive background in civilian personnel and financial matters greatly assisted Miller in that important area of his work. Second, and more importantly for the future of the Defence Department, Miller prepared Armstrong as his

replacement.[59] Frank Miller was therefore able to combine a firm grasp of civilian matters in National Defence with what he already understood to be the real issues facing the military side.

Back in Uniform – The RCAF's Oldest Recruit

When it became public knowledge in early 1960 that Diefenbaker wanted Foulkes replaced, those knowledgeable about the Defence Department surprisingly suggested that Frank Miller was a serious candidate. The logical choice was one of the Service chiefs. The Chief of Naval Services, Vice Admiral Dewolf, appeared to have the inside track if the government decided to set precedent and rotate the chairmanship among the three Services. But the Chief of Naval Services was too old. Further, the RCN was also the smallest of the three Services from the point of view of manpower and expenditure. Reflecting the diminished importance of the Canadian army in the cold war, the Chief of the Army General Staff, Lieutenant-General Clark, was not seen as a serious choice. The government wanted neither a sailor nor a soldier as Foulkes's replacement. Yet surprisingly, the ranking airman was equally unacceptable. At this time Ottawa faced several critical defence policy issues associated with air power and nuclear weapons. But Hugh Campbell was not chosen.[60] Defence Minister Pearkes informed Frank Miller that he was being brought back into uniform as the next Chairman of the Chiefs of Staff Committee.

In April 1960 Miller dusted off his Air Marshal uniform and started his second career in the RCAF as its "oldest recruit." On June 2, he chaired his first COSC meeting. On September 1, 1961, Frank Miller was promoted to Air Chief Marshal; the only active Canadian airman to hold that rank.[61] When the Liberals returned to power in 1963 Miller worked with Defence Minister Hellyer towards the integration and unification of the Canadian military. In August the following year, Miller became Canada's first Chief of the Defence Staff. Noteworthy is that Hellyer retained Miller as CDS for another two years knowing that his senior military officer supported the military's integration but not unification. Charles Foulkes tried to convince Prime Minister Pearson and Hellyer to permit him to return as CDS because of his unequivocal support for the Defence Minister's proposed structural changes to the country's military. Yet Hellyer stayed with Miller, writing later that his CDS had "the right qualities."[62]

In 1966 Frank Miller retired and left the future of the Canadian Forces in the hands of his boss. Under Miller's direction most of the hard work was done to prepare the military for change. Loyal to the end, his retirement allowed Hellyer to choose a CDS completely committed to leading a unified Canadian military. Miller and his wife spent their retirement years in Charlottesville, Virginia. Frank Miller passed away October 20, 1997. Sadly like his public life, few Canadians took note.

Conclusion

By describing the career of Frank Miller this paper has accomplished two things. First, more is known about this remarkable man whose thirty-five years of service gives an insight into the maturation of the RCAF through four distinct periods: the Depression, the Second World War, the postwar and the cold war. He became an accomplished airman and leader. His operational tours and professional training in Britain and the United States prepared him for the challenges confronting Canada's Air Force as it recovered from postwar retrenchment and expanded once more during the cold war. By the mid-1950s Frank Miller's brilliant career had not only been noticed by senior officers, but by politicians and senior public servants as well. He was "ordered" by Prime Minister St. Laurent to become the Deputy Minister of National Defence. This unprecedented event was followed by another five years later when George Pearkes brought Miller back in uniform as the military's most senior officer.

This paper's second accomplishment therefore follows from the first. Describing Frank Miller's career answers the question as to why he rose to the highest military rank to lead a peacetime military. His consistent outstanding performance and experience gained as a senior officer and public servant placed him at the top of the competition. No doubt his air force background and experience working with Canada's allies made him a preferable candidate to his navy and army peers. As an airman, he also benefitted from the reality that cold war nuclear strategy relied heavily on air power. More money was spent on the RCAF than the Canadian Army and RCN combined. Yet the government did not choose Miller the airman. There was more. Lauded for his work as DM, Miller's civilian experience was as important in leading a peacetime military as was his military background. Miller had a proven career record of excellence, dedication and loyalty.

These were the "right qualities" to which Hellyer referred. They set Miller apart as a leader from other ranking officers. These personal and professional attributes also distinguished Miller from Roy Slemon and Charles Foulkes. These two contemporaries of Miller were themselves outstanding leaders and enjoyed successful military careers. Fortunately for them, their professional accomplishments overshadowed those of Frank Miller because of previous published work and in the case of Foulkes, an extensive legacy written by the man himself. This work has evened the scholarly playing field. It has provided the reader with an understanding and appreciation of the remarkable public life of Frank Miller. By doing so it not only establishes him as an outstanding leader of the cold war military, but as one of the best.

Notes

1. "Airman Heads Chiefs," *The Ottawa Citizen*, April 28, 1960. Miller File, Directorate of History and Heritage (DHH).
2. Ibid.
3. Ibid.
4. Sean M. Maloney, "General Charles Foulkes: A Primer on How to be CDS," in *Warrior Chiefs: Perspectives on Senior Canadian Military Leaders*, ed. Bernd Horne and Stephen Harris (Toronto: Dundurn Press, 2001), 219.
5. Library and Archives Canada (LAC), Record Group 2, RCAF Record of Service, 139 Air Chief Marshal Frank Miller, CBE, CD. Record signed by Paul Hellyer, MND, August 1966. Subsequent references quoted as "Miller Service Record."
6. Sandy Babcock, "Air Marshal Roy Slemon: The RCAF's Original," in *Warrior Chiefs: Perspectives on Senior Canadian Military Leaders*, ed. Bernd Horne and Stephen Harris (Toronto: Dundurn Press, 2001), 258.
7. Career summary for Air Member for Personnel (AMP), August 28, 1946, Miller Service Record.
8. Air Chief Marshal Miller (Retired) interview by Douglas Bland, September 22, 1992, DHH. Subsequent references will be quoted as "Bland Interview."
9. Bland Interview.
10. Larry Milberry, *Sixty Years: The RCAF and CF Air Command 1924-84* (Toronto: CANAV Books, 1984), 47.
11. W.A.B. Douglas, *The Creation of a National Air Force: The Official History of the Royal Canadian Air Force Volume II* (Toronto: University of Toronto Press, 1986), 120.
12. Career summary, August 28, 1946.
13. Career summary written for Paul Hellyer, August, 1966, Miller Service Record
14. Ibid.
15. Milberry, 53. During the depression years the RCAF would consume half their civil flying time conducting anti-smuggling patrols for the Royal Canadian Mounted Police (RCMP). See Douglas, 117.
16. Babcock, 264.
17. Career summary, August, 1966.
18. Bland Interview.
19. Career summary, August 28, 1946.
20. Brereton Greenhous, Stephen J. Harris, William C. Johnston and William G.P.Rawling, *The Crucible of War 1939-1945: The Official History of the Royal Canadian Air Force Volume III* (Toronto: University of Toronto Press, 1994), 13.
21. Douglas, 145.
22. Career summary, August 28, 1946.
23. Ibid.
24. Greenhous et al., 20-23.
25. Unknown author, "The Canadian Overseas Air Force Policy," undated DHH summary, File 83/698, 1.
26. Ibid.
27. Ibid.
28. Career summary, August 28, 1946.
29. Ibid.
30. Ibid.
31. Ibid.
32. Ibid.
33. Ibid.
34. Bland Interview.
35. Career summary, August 28, 1946.
36. For reasons unknown, official records omit Miller's posting to RCAF Station Skipton-on-Swale. The exact

date he arrived there is also not clear. This author has determined that Miller left No.6 Group HQ sometime in June or early July 1944 – well before the official record which has him leaving HQ for Topcliffe in September 1944. Greenhous et al., 915. See also Miller Service Record.

37. Ibid., see photo, 495.

38. Historical Reports, RCAF Station Skipton-on-Swale, July 17, 1944, DHH.

39. Career summary, August 28, 1946.

40. Ibid.

41. Major Stouffer, "An Expression of Canadian Nationalism: The History of No.1 Air Division and RCAF Cold War Air Power Choices" (PhD Thesis, Royal Military College of Canada, January 2005), Chapters 1 and 2.

42. Undated note by Air Marshal Curtis. Miller Service Record.

43. Career summary, August 28, 1946.

44. Babcock, 264.

45. Letter from Air Marshal Slemon to General Norstad, June 5, 1954, Miller Record of Service, DHH.

46. Claxton message to General Norstad, June 12, 1954, Miller Service Record, DHH.

47. Bland Interview.

48. Ibid.

49. Ibid.

50. Douglas L. Bland, *Chiefs of Defence: Government and the Unified Command of the Canadian Armed Forces* (Toronto: Brown Book Company Limited, 1995), 154-8.

51. Bland Interview.

52. Ibid.

53. Various Minutes to Meetings of the Chiefs of Staff Committee, File 2002/17, Box 71, Joint Staff Fonds, DHH.

54. Bland Interview.

55. Ibid.

56. Jon B. McLin, *Canada's Changing Defense Policy, 1957-1963: The Problems of A Middle Power in Alliance* (Baltimore: John Hopkins University, 1967), 178-81.

57. Minutes of a Special Meeting of the Chiefs of Staff Meeting, paragraph 27, December 4, 1957, File 2002/17, Box 71, Joint Staff Fonds, DHH.

58. As an example see Minutes to the 608th Meeting of the Chiefs of Staff Committee, paragraph 17, File 2002/17, Box 71, Joint Staff Fonds, DHH.

59. Bland Interview.

60. "Civilian may be successor to Foulkes," *The Province*, January 23, 1960. Miller File, DHH.

61. Lloyd Breadner was promoted to Air Chief Marshal upon retirement in 1945.

62. Paul Hellyer, *Damn the Torpedoes: My Fight To Unify Canada's Armed Forces* (Toronto: McClelland & Stewart Inc., 1990), 85.

Major Raymond Stouffer

Major Raymond William Stouffer was born April 21, 1956 at Baden-Soellingen, West Germany. He is the only child of Chief Warrant Officer (retired) Norman Hollis Stouffer and Gertrud Waltraud Stouffer (nee Schneider).

Major Stouffer joined the Canadian Armed Forces on August 10, 1975 and attended the Royal Military College of Canada. He graduated in May 1979 with a Bachelor's Degree (Honours) in History. Major Stouffer was employed in the military as an Air Force Transportation Officer and specialized in tactical and strategic air lift operations. He is a qualified C130 Hercules Loadmaster. Over the course of his career, Major Stouffer filled a number of command and staff positions within Air Command and National Defence Headquarters. His last tour in Ottawa was as a member of the ill-fated Strategic Airlift Project Office that was to select a new strategic transport aircraft for the Canadian Forces.

In May 2000, Major Stouffer received his Masters Degree in War Studies from the Royal Military College (RMC). In September 2002 he enrolled as a full-time PhD student in the same programme at RMC. His three areas of academic study include air power, Canadian defence policy and Canadian history. Major Stouffer successfully defended his PhD Thesis on January 28, 2005 and was awarded a Doctorate of Philosophy (War Studies) at the spring Convocation on May 20, 2005. He is currently employed as an Assistant Professor in the Department of History at RMC.

Major Stouffer is married and has two children, Kimberley, aged 23, and Alexander, aged 18. Major Stouffer's family lives in Orleans, Ontario.

Chapter 7

Good Partners or Just Brass Intrigue: The Transnational Relationship Between USAF and the RCAF with Respect to the North American Air Defence System, 1947–1960

Matthew Trudgen

Introduction

In the late 1940s and the 1950s, Canada and the United States faced the threat of intercontinental-range bombers armed with nuclear weapons from the Soviet Union. As a result, the American government began to construct an air defence system to protect the continental United States. However, the Americans quickly realized that their national air defences would be insufficient because their early warning radars would not be able to provide enough warning time of Soviet bombers flying over the North Pole and through Canada to strike at the United States. This problem was made even worse by the fact that Canada did not have the resources available to construct an extensive early warning radar system on their territory. Nor could the Canadians provide enough jet interceptors to stop a Soviet bomber attack. Therefore, both countries began to cooperate in developing a continental air defence system. However, this process was slowed by disagreements that took place within the Canadian political establishment and Armed Forces. These debates emerged because the Cabinet, the Department of External Affairs and the Royal Canadian Air Force (RCAF) all had different conceptions of what air defence policies best served the national interest. For example, the leaders of the RCAF strove for closer ties with the United States, as their main objective was to produce the most effective air defence system possible. On the other hand, the Cabinet and External Affairs were more worried about the impact of these air defences on Canadian sovereignty than about their military effectiveness.

This paper will argue that the RCAF's leadership relied on its close relationship with the United States Air Force (USAF) to enhance its influence on the development of this air defence system. It will first outline the post-World War II "air defence problem" and how both countries attempted to address it. The paper will then detail how this close relationship developed between the two air forces and the policy environment that the RCAF leadership operated in during this period in order to understand why USAF became the RCAF's natural bureaucratic partner. Finally, it will use the creation of the North American Air Defence Command (NORAD) in the mid-to-late 1950s as a case study of how this relationship operated in this period.

The Early Days of Air Defence: 1945 to 1950

With the conclusion of the Second World War in 1945, there was a realization in Canada and the United States that a potential threat to North America existed from Soviet bombers flying over the North Pole. For instance, American military planners and the Post-Hostilities Committee in Canada were aware of the importance of the airspace over the Canadian Arctic for the defence of the continent.[1] Moreover, many officials and officers recognized at this time that a defence against atomic bombardment was a viable strategy because of the limited explosive power of the first atomic bombs.[2] Nevertheless, it should be noted that the development of these air defences began very slowly due to the fact that the Soviet bomber force was a potential rather then a real threat in 1945 and 1946. In addition, the combination of the limited American and Canadian defence budgets of the late 1940s and the pressures of post-war demobilization meant that few resources were available for such projects. However, the onset of the cold war and a number of developments in the Soviet Union soon spurred interest in these systems in both countries.

The first of these events was the development by the Soviets of a new long-range bomber. While the Soviets had built several advanced bombers in the 1930s, their focus on short-range tactical aircraft during the Second World War had left them without an effective heavy bomber in 1945. However, in 1947, the Soviet Air Force unveiled the TU-4 Bull, which was a direct copy of the American B-29 Superfortress and which entered service in 1949. The TU-4 had many failings, as it was vulnerable to modern jet fighters and lacked the range to be a true intercontinental-range bomber. For instance, it only had a maximum range of just over 3,000 kilometres.[3] Despite these weaknesses, the Joint Chiefs of Staff (JCS) took this aircraft very seriously, as they stated in 1949 that while the range of this bomber

was limited, on one way missions it could still bomb most of the major urban centres in the United States.[4] The second development was the test of the first Soviet atomic bomb in August 1949.[5] With this development, the Soviet bomber threat became far more serious, particularly after it was estimated by the United States that by 1954 the Soviets would have enough atomic bombs to devastate North America.[6] Finally, the start of the Korean War in 1950 played a role in encouraging interest in air defences. While this conflict remained confined to the Korean Peninsula, the invasion of South Korea seemed to be the first part of a general communist offensive against the Americans and their allies and helped to spur increased defence spending in Canada and the United States.[7]

As a result, government officials such as the Canadian Minister of National Defence, Brooke Claxton, now argued that a Soviet bomber attack was a serious threat to North America, while the Chief of Staff of the United States Air Force, General Hoyt Vandenberg, called for a "Manhattan Project" to improve air defences.[8] National Security Council 68, which was approved by the Truman administration in 1950, further asserted that air defences need to be improved in order "to provide reasonable assurance, in the event of war, that it [the United States] could survive the initial blow and go on to the eventual attainment of its objectives."[9] With these developments, more funds became available for both countries to deploy jet fighters and for the development of radar lines in the United States.[10]

The Development of a Continental Approach to Air Defence: 1950–1956

Until approximately 1950, all these improvements were a part of an effort by Canada and the United States to strengthen their own national air defence systems. However, there was a growing sense in both nations that a more continental approach to air defence was needed. The most serious problem with this national approach was that it placed the burden of building early warning radars in Canada entirely on the Canadian government. This was a serious problem because despite the dramatic increase in the Canadian defence budget that took place in the early 1950s, there were still limits on what the Canadians could do, since they were sending substantial forces to Europe to support the North Atlantic Treaty Organization (NATO). Furthermore, Canada had a relatively small force of fighter aircraft, and Claxton argued that there was no point in constructing an extensive early warning system without the fighters to support it. This was a serious problem, as much of the American industrial base was located in the northeast, and with the limited radar coverage in Canada, the Soviet bombers would only be detected when they were close to or even over their targets. General Ennis Whitehead, the commander of the American air defences in the early 1950s, warned his superiors that without more effective radar coverage in Canada, the American air defences would have less than an hour's warning of a Soviet attack.[11] In addition, the Americans had concluded that if North America was to be defended, then USAF fighters would have to intercept Soviet bombers over Canadian territory. Therefore, both countries agreed to construct several major radar lines on Canadian soil. The first was the Pinetree Line, which was constructed in the early 1950s. It was then followed by the Mid Canada Line and the Distant Early Warning (DEW) Line that became operational in the late 1950s. As well, procedures were created that allowed USAF fighters to intercept unidentified aircraft over Canada and the United States. Finally, in September 1957 both nations agreed to the formation of NORAD to exercise operational control over this continental air defence system. The agreement was formalized on May 12, 1958.

The Relationship Between USAF and the RCAF

An important part of this process was the strong relationship between USAF and the RCAF. This relationship emerged in the late 1940s and the early 1950s and grew rapidly thereafter. Professor Joel Sokolsky of the Royal Military College of Canada has described this kind of relationship as "almost trans-national, non-governmental set of institutional and personal ties, which can exist almost independently of governments."[12] Aside from the common identity of airmen and the fact that both countries shared common cultural and linguistic backgrounds, the relationship emerged for several reasons. First, there was the fact that USAF officers, unlike their Royal Air Force counterparts, treated their RCAF brethren as allies rather than as colonials.[13] In addition, the relationship was built on a strong mutual respect, since USAF saw the RCAF as a worthy partner for the defence of North America. Indeed, with the rapid rearmament of the Canadian military that took place after 1950, the RCAF had emerged as a modern air force, equipped with fighter aircraft such as the F86 Sabre and the Canadian designed and built CF100 Canuck. Likewise, the RCAF saw their American counterparts as an excellent

model for them to follow even taking into account the fact that USAF was a bomber centred air force, while the RCAF placed its emphasis on fighter aircraft. Another factor was that both air forces were new organizations. The RCAF had been created in 1924 and had only gained its own Chief of the Air Staff in 1938; while USAF had become independent of the United States Army in late 1947. Therefore, neither organization brought into this relationship too much baggage from the past, which enhanced the closeness of their ties.

Furthermore, both air forces saw the problem of air defence in the same way as it was military efficiency, not political factors such as sovereignty, that concerned them. The common view of the air defence situation emerged at least partially due to the fact that many Canadian airmen such as Wilfred Curtis and C. R. Dunlap served in organizations with other USAF officers such as the Permanent Joint Board on Defence (PJBD) and the Canada-United States Military Co-operation Committee (MCC). These bodies helped to manage the Canada-United States relationship; the MCC was also charged with developing joint defence plans. As a result, these individuals not only became interested in continental defence issues, but they grew (with their American counterparts) to have a common understanding of the air defence problem. All of this became especially significant since both Curtis and Dunlap later served as the Chief of the Air Staff for the RCAF.[14] Finally, the relationship was fostered through a number of unofficial links over the years including bonds forged on fishing trips to Labrador. Indeed, the Chairman of the Chiefs of Staff Committee, General Charles Foulkes, had urged the RCAF to establish a fishing camp at Eagle River, Labrador to allow for officers from Canada and its allies to meet and discuss policy in a relaxed atmosphere outside the hectic atmosphere of their capitals. Of course, this also meant outside of the supervision of their governments.[15] As a result, by the early 1950s, USAF emerged as the natural bureaucratic partner for the RCAF and served as a reliable source of support for the RCAF ambitions of having a first class air force.

One result of this relationship was that it allowed the RCAF to have more influence on the policy process than is ideal in a liberal democracy. In liberal democracies, governments are supposed to make policies (with the advice of their civilian and military advisors) and then ask the military and the civilian bureaucracy to carry out those policies. However, in this situation, with the support of USAF, in certain cases the leadership of the RCAF was making policy decisions on air defence in the 1950s. This occurred in two ways. First, the RCAF and USAF would cut side deals without the Canadian government's knowledge. One example was the interception of unidentified aircraft in Canadian airspace by USAF fighters. While under PJBD recommendation 53/1 the Canadian government gave USAF permission to intercept unidentified aircraft over Canada, they also mandated that the American fighters would have to be under Canadian operational control while they were in Canadian airspace. However, after the recommendation was agreed upon, the RCAF and USAF established a channel that would allow, if the need arose, for the control of these USAF fighters in Canadian airspace to be transferred back to Americans.[16] Moreover, the RCAF used USAF as a means to bypass the Canadian Cabinet and the Department of External Affairs in order to achieve things that the RCAF desired.

This situation has been criticized, most notably by the political scientist Ann Denholm Crosby who argued that the cooperative Canada-United States military relationship has led to the gradual acceptance of policy that did not correspond to the Canadian government's assessment of the strategic situation. She added that this had led to the phenomenon of unanticipated militarism in Canadian policy, a concept she borrows from the American political scientist Moris Janowitz.[17] In his 1959 work *Peacemaker or Powder-Monkey*, Canadian journalist James Minifie also made accusations that "brassy intrigue" led to the creation of NORAD.[18] However, the reality is that the RCAF is a bureaucracy with guns (or in this case with fighter aircraft), and its leaders have the responsibility to defend its interests. As well, all successful bureaucracies will find allies to support their ambitions, and the most logical one for the RCAF was USAF, as the RCAF faced challenges from other parts of the Canadian military and political establishment in this period.

For example, while the RCAF believed that air defence was one of the most important responsibilities of the Canadian military, the Canadian Army and the Royal Canadian Navy (RCN) saw things differently. They saw the air defence role primarily in budgetary terms, as the more resources that were utilized for it, the fewer that were available for their forces. Indeed, the RCN had no formal role in continental air defence. It should be noted that because the Canadian Army had operated anti-aircraft artillery during the Second World War, and had retained responsibility for these weapons in the post-war period, it remained somewhat interested in operating surface-to-air missiles until this role was

transferred to the RCAF in the late 1950s.[19] Nevertheless, in the end, neither the Canadian Army nor the RCN was a major obstacle to the RCAF's plans for air defence. First, both services were occupied in the 1950s with rebuilding their own forces which had been rapidly demobilized after the Second World War. Moreover, the Canadian defence budget was large enough for most of the period to keep the services relatively content. However, the most important factor was that USAF was paying for most of the costs of the North American air defence system, which helped to reduce the Canadian military's potential burden of constructing these defences. Indeed, it was not until the CF105 Avro Arrow—an expensive Canadian only project—that there was serious conflict between the RCAF and the other two services. However, while the conflict between the services was more potential than real, the one between the RCAF and the Department of External Affairs and the Cabinet was much more significant.

For instance, while External Affairs was not opposed to working with the United States to improve North America's air defences, they were often sceptical of the need for more of these systems. Indeed, they were less concerned about the military effectiveness of these defences and were more worried about political factors such as protecting Canadian sovereignty. External Affairs also believed that in return for cooperating with the Americans in the development of the North American air defence system that Canada should receive concessions from the United States. These included strong limits on the American military presence in Canada and more consultation between the two governments on America's cold war strategy.[20] For example, as Joseph Jockel noted, External Affairs saw NORAD as "not just a command and a diplomatic agreement, but also a lynchpin to what the diplomats hoped would be a consultative arrangement between the United States and Canada in the event of a severe international crisis."[21] In addition, because External Affairs wanted to remain influential to the government, there was an incentive to tell the government what it wanted to hear. For instance, this factor further influenced External Affair's interest in consultation with the United States because many Canadian politicians were interested in the concept. For these politicians, consultation was a way they could shield themselves from the controversy over whether the United States would be making the decision on whether nuclear weapons would be used against the Soviet Bloc.[22]

The government of Prime Minister Louis St. Laurent also had a different conception than the RCAF, as its main goal was to get re-elected. Thus, to accomplish this goal, St. Laurent's Cabinet had to strike a balance between different priorities. On one hand, they had to support the construction of an air defence system in order to both defend the country from the Soviets and to show the Canadian people that they were serious in this effort. On the other hand, the government had to be careful that they did not spend too much money on these air defences so that other more important commitments, such as Canada's social programs and its contributions to NATO, were not negatively affected. Furthermore, the Prime Minister and his ministers had to balance the need to work with the Americans to protect the continent from the possible threat this posed for Canadian sovereignty. This need for balance was reflected in the positions of the Ministers of National Defence, Brooke Claxton and Ralph Campney. On one hand, they represented and defended the interests of the military in Cabinet. However, more importantly, they were a member of the governing party and part of their responsibility was managing their departments to avoid anything that would either be too costly or too damaging to the political interests of the government. Therefore, along with the rest of the Cabinet, they supported defence cooperation with the United States, but they also wanted limits on such cooperation.[23]

One important reason why the Cabinet's and External Affairs' opinions on air defence were different then the RCAF's was the influence of Canadian nationalism. For many Canadian officials and politicians, sovereignty was not just about questions of borders and airspace, it was about something more. It was a dream of a Canada that could conduct its own foreign policy once it was free of the influences of the British Empire. For them, Canada was a nation, in the words of Canadian official Escott Reid, which had "not won from London complete freedom to make our own decisions on every issue - including that of peace and war - in order to become a colony of Washington."[24] One of the most important reasons for this was the influence of the man who supervised the creation of a modern Canadian foreign policy bureaucracy, O. D. Skelton, the Under Secretary of External Affairs from 1925 until his death in 1941. In the words of historian Norman Hillmer, Skelton "was determined to build a department that would be an instrument of a nationalist foreign policy," which was a vision that he shared with his political master, Prime Minister William Lyon Mackenzie King.[25] It was also a product of a generation change that began after the First World War, although it can be argued that it was the product "a handful of English Canadians—academics, artists, Oxford-trained mandarins, and journalists [who] decided that Canada

should officially lobotomize Britishness."[26] However, whatever the cause, this nationalism—which was originally directed at the British Empire—did not go away with the decline of the imperial connection, but was redirected towards the United States. Indeed, just because Canada with the Ogdensburg agreement in 1940 "had committed herself to a permanent military alliance with the United States for the common defence of North America," did not mean that Canadian ministers or their officials were going to sit back and be quiet allies of the Americans.[27]

Part of this concern was fuelled by the problems that occurred during the Second World War when Canada had cooperated with the United States to protect the continent, particularly in the Canadian North. Vincent Massey, the High Commissioner in London at that time, noted in early 1943 that "the Americans have apparently walked in [to the Canadian Arctic] and taken possession in many cases as if Canada were unclaimed territory inhabited by a docile race of aborigines."[28] However, Canada's sensitivity with respect to national sovereignty was exacerbated as the United States shifted from being a regional power to a global one. From early 1942 onwards, officials from External Affairs were worried about the rise of American power, and its potential impact on Canadian interests, and that increasingly Canada would be taken for granted and treated as a second rate ally. For example, in late 1941, the Under-Secretary of State for External Affairs, Norman Robertson, noted that the United States as a world power would now be using "more direct and forceful methods of exerting its influence" whereas before the war it had taken the approach of "pursing a fair and friendly policy towards its neighbours."[29] This sentiment was further fuelled by the battle over the creation of a Canadian Military Mission in Washington as well as the effort to gain representation on the Combined Boards that coordinated the Allied war effort. In addition, there was a desire within the Department after the war that Canada should maintain its freedom of action in foreign affairs. Ultimately, all of these sentiments were reflected in a desire to have a defence relationship with the United States, but only so much of one. However, it should be noted that neither the Cabinet nor the Department of External Affairs saw a contradiction between their desire to see the United States fulfil its responsibilities as the leader of the "free world" and wanting to limit the American presence in Canada. As such, they would support the presence of thousands of American troops armed with nuclear weapons in West Germany and Western Europe, but would oppose the stationing of one squadron of USAF jet fighters at Torbay, Newfoundland.[30]

The end result was that this nationalism affected their conception of the national interest and complicated Canada's relationship with the United States. This created a problem for the RCAF on the issue of air defence, as they for the most part did not share this sentiment. Moreover, the RCAF was supportive of the idea that air defence was a continental responsibility. However, while the Cabinet and External Affairs were formidable obstacles to the RCAF, there were still many opportunities for the RCAF to manoeuvre. This situation was partly due to the complexities of the issues, which meant that there was often a certain amount of inattention to the specifics of defence policy on the part of the St. Laurent government. This was even the case of an active and effective Minister of National Defence such as Claxton who was often distracted by other issues such as the politically sensitive controversy over the misappropriation of funds at Petawawa that was exposed by the Currie Report in 1952.[31] While Claxton and his successor, Ralph Campney, could make interventions, in the end they and the Cabinet could only set the broad outlines of policy. As a result, much of the direction of defence policy was often left to the Chairman of the Chiefs of Staff Committee, General Charles Foulkes. Foulkes was not only politically savvy, which his Ministers appreciated,[32] but he had his own ideas (which were compatible with the RCAF's conceptions) of what was in the national interest. As well, Foulkes had an effective list of contacts in Washington including at least two Chairmen of the Joint Chiefs of Staff, General Omar Bradley and Admiral Arthur Radford.[33] Thus, throughout the 1950s, the RCAF and USAF worked together, often behind the scenes, to create a more effective continental air defence system.

The Creation of NORAD: 1954 to 1958

The best examples of this close relationship were the events leading up to the creation of North American Air Defence Command. By the mid-1950s, as the American political scientist Joseph Jockel has stated, "the national air defence systems which Canada and the United States had put in place … were electronically, geographically, and tactically intertwined across the North American continent."[34] Despite this progress, one problem remained. While a number of informal agreements had been drawn up between Canada and the United States to control parts of the system in a time of war, there was no one organization that had operational control of the defences. The American and Canadian air defence systems were integrated; however, they could only be coordinated in such a way that required constant

communication and good relations between the commanders. In addition, while there was a joint air defence plan, the implementation of it required an effort that combined one American command structure with control over American and Canadian aircraft in the United States and one Canadian command system with authority over RCAF and USAF aircraft in Canadian airspace, except that authority over United States aircraft had been delegated back to USAF.[35] As a result, both air forces had come to the realization that the border (for the purpose of intercepting aircraft) was not operationally relevant and the lack of a central command hindered efficiency.[36] Another reason why these two air forces were attracted to a continental air defence command was USAF doctrine. It was based on the idea that, since air assets were extremely valuable and available in limited numbers, there was a need for them to be well coordinated through a central command. This was particularly important because RCAF doctrine had been largely a copy of USAF doctrine since the end of the Second World War.[37] However, there was one serious barrier to creating such a command: the Americans' reluctance to deal with the Canadian government and the Department of External Affairs.

The American government and military knew from prior experience that the Canadian government was sensitive to any potential threat to its sovereignty. Moreover, many in the United States military were concerned that the Canadians would want to link a continental air command to NATO. Such a linkage, in the minds of both the Cabinet and the Department of External Affairs, was natural for Canada. They believed that Canadian sovereignty was protected by membership in multilateral organizations such as NATO, in which the power of the United States was offset by the other member states. On the other hand, in a bilateral arrangement with the Americans, there would be nothing to stop the United States from simply overwhelming Canadian sovereignty. However, a linkage between a North American air defence command and NATO was not acceptable to the American military. It did not want any constraints on its ability to defend its territory and did not want to share intelligence about its air defences and Strategic Air Command with its NATO allies, whom it did not trust with such information.[38] Nevertheless, both air forces were convinced that such a command was needed. They felt that a continental air defence system had been constructed, and it was their responsibility to make it work to the best of their abilities.

Therefore, in the winter of 1954 to 1955, a report by a joint planning group—made up of RCAF and USAF officers—argued that the absence of a single air defence commander imposed restrictions on the training of personnel in the system and the ability to coordinate a response to a Soviet bomber attack.[39] In February 1955, the Joint Canada-United States Military Study Group, after being briefed on this subject, presented a proposal for a continental air defence command to each of the countries' senior military leaders.[40] While the Canadian Chiefs of Staff Committee agreed with the report, they did not present it to the Cabinet. They feared that the St. Laurent government would not accept it because of the political implications of having Canadian forces under the operational control of an American commander in peacetime. As well, an attempt by Air Marshal Roy Slemon, the Chief of the Air Staff, to create interest in such a command through a speech to the Aviation Writers Association in 1955 was shot down by the Minister of National Defence, Ralph Campney. Campney stated that Slemon was only "stating a trend in military thinking," and not official government policy.[41] Despite the fact that the Canadian government had agreed to create a continental air defence system, it was unwilling to accept the need for a central command for it. Consequently, it seemed unlikely that such an organization would be created. Nonetheless, both the RCAF and USAF continued to manoeuvre behind the scenes. In September 1955, General Earl Partridge, the Commander-in-Chief of United States Continental Air Defense Command, noted in a memo that the Canadians were not willing to take the first step to create a North American air defence command due to the political sensitivities of the issue. However, he added that he had learned through "unofficial" channels that an American proposal for a joint air defence command would receive the support of the Canadian Chiefs of Staff Committee.[42]

With the help of USAF Chief of Staff, General Nathan Twining, the JCS became convinced that an integrated air defence command could be created. After some debate, on January 18, 1956, the JCS informed the American Secretary of Defense, Charles Wilson, that a central command with operational control over the American and Canadian air defence forces in peacetime was needed. This memo requested permission to approach the Canadian military. Wilson agreed and a letter was sent to General Foulkes, the Chairman of the Canadian Chiefs of Staff Committee, outlining their proposal. The committee replied on February 27 stating that the issue needed further study before both countries could move forward. As Joseph Jockel has noted, "of course the overall result of any such study was a foregone conclusion. After all, the Chief of Staff of the USAF and the … RCAF … were strong

supporters of the designation of a single commander." The study resulted in a report that stated that the two air defence efforts should be integrated and operational control over them should be delegated to one commander.[43]

As a result, Wilson formally approved the agreement in March 1957. In addition, while the upcoming Canadian federal election delayed its acceptance, the new Conservative government of Prime Minister John Diefenbaker approved it in July 1957. While the Canadian government and External Affairs were later able to both formalize the agreement and modify it to increase the amount of consultation between the two governments, the command came into being very much as the two air forces wanted.

Conclusion

From the late 1940s to the late 1950s, the RCAF's leadership used its close relationship with their USAF counterparts to influence the development of the North American air defence system. Indeed, this relationship allowed the RCAF to pursue initiatives and create policies that corresponded to their conception of the national interest. It also gave them the ability to outmanoeuvre their opponents within the Canadian political and military establishment. In fact, it can be argued that without this special relationship, it is doubtful that NORAD would have come into being. However, what are the lessons that can be drawn from this experience.

First, whether one approves of this relationship and its influence on Canadian policy, one must understand it, particularly if one wants to grasp how leadership of the Royal Canadian Air Force used it to serve its interests over the years. Indeed, this relationship has remained very important for the leaders of the Canadian Air Force, since USAF has continued to serve as their natural bureaucratic partner. For example, this relationship with USAF's leadership allowed Canada to quickly replenish its stocks of precision guided munitions during the Kosovo bombing campaign in 1999. It was also helpful during Canada's acquisition of the C17.

It is also important to understand this relationship, as it has served Canadian interests. Indeed, these ties not only helped to protect Canada from the Soviet bomber threat in the late 1950s and early 1960s, but secured through NORAD, as Joel Sokolsky has argued, not so much a "seat at the table" as a "seat at the console" and the opportunity to engage in discussions at NORAD "in the event of a warning and/or an attack."[44] Otherwise, Canada would not have such a voice and would face a situation in which the Americans would make all the decisions whether Canada liked it or not. Indeed, it can be argued that Canada used its position in NORAD to gain some say "in the operation of the political-strategic balance affecting its security."[45] These lessons are especially critical now because since the end of the Second World War there have only been two periods when the United States was both seriously interested in defending North America and needed Canadian assistance to achieve this goal. The first occasion was in the late 1940s and the 1950s, and the second is the current situation after the terrorist attacks of September 11th 2001. Thus, understanding how the RCAF leadership has worked in the past with its American counterparts to protect the continent is an important way to draw lessons from the past on how to protect North America and serve Canadian interests in a post-September 11th world.

Notes

1. *Final Report of the Advisory Committee on Post-Hostility Problems*, January/February 1945, *Documents on Canadian External Relations (DCER)*, Vol. 11, 1944–1945, 1567; Joseph Jockel, *No Boundaries Upstairs: Canada, the United States and the Origins of North American Air Defence 1945–1958* (Vancouver: UBC Press, 1987), 11–13; Stephane Roussel, *The North American Democratic Peace: Absence of War and Security Institution-Building in Canada-US Relations, 1867–1958* (McGill-Queen's University Press: Montreal & Kingston, 2004), 225.

2. Lawrence Freedman, *Evolution of Nuclear Strategy* (New York: St. Martin's Press, 1981), 32.

3. Steven Zaloga, *The Kremlin's Nuclear Sword: The Rise and Fall of Russia's Strategic Nuclear Forces, 1945 to 2000* (Washington DC: Smithsonian Institution Press, 2002), 16; Steven Zaloga, *Target America The Soviet Union and the Strategic Arms Race, 1945–1964* (Novato: Presidio, 1993), 76–78.

4. Richard K. Betts, "A Nuclear Golden Age? The Balance Before Parity," *International Security* 11, no. 3 (Winter 1986–1987): 7. The United States had planned similar one-way missions with its B-47 jet bombers in the early years of the cold war. Zaloga, *Target America*, 76.

5. Roussel, 212; Zaloga, *Target America*, 71–75.

6. Betts, 7.

7. George Lindsey, "Canada-US Defense Relations in the Cold War," in *Fifty Years of Canada-United States Defense Cooperation, The Road From Ogdensburg*, ed. Joel J. Sokolsky and Joseph T. Jockel (Lewiston, New York: The Edwin Mellen Press, 1993), 62.

8. Roussel, 212; Jockel, *No Boundaries Upstairs*, 71; James Meikle Eglin, *Air Defense in the Nuclear Age, The Post-War Development of American and Soviet Strategic Defense Systems* (New York: Garland Publishing Inc, 1988), 51; Brooke Claxton, "Extracts from an Address by the Minister of National Defence The Hon. Brooke Claxton, to the Advisory Council Meeting, National Liberal Federation, 26 February 1951," in James Eayrs, *In Defence of Canada*: *Peacemaking and Deterrence* (Toronto: University of Toronto Press, 1972), 401–4.

9. "NSC 68: United States Objectives and Programs for National Security (April 14, 1950)," in *American Cold War Strategy Interpreting NSC 68*, ed. Ernest R. May (New York: Bedfords/St. Martins, 1993), 76–77.

10. Jockel, *No Boundaries Upstairs*, 36–7.

11. Ibid., 43–4.

12. Joel J. Sokolsky, "E xporting the "Gap" *The American Influence, In The Soldier and the State in the Post Cold War Era*, eds. Albert Legault and Joel Sokolsky (Kingston: Queen's Quarterly Press, 2002), 213. Sokolsky first noted this relationship in both United States and Allied naval officers who had attended National Command Course at the United States Naval War College in the 1950s. Ibid., 234.

13. C. P. Stacey, *A Date with History: Memoirs of a Canadian Historian* (Ottawa: Deneau, 1982), 256.

14. I would like to thank Richard Goette for first pointing out this fact.

15. Sean Maloney, "General Charles Foulkes: A Primer on How to Be CDS," in *Warrior Chiefs: Perspectives on Canadian Senior Military Leadership,* ed. Bernd Horn and Stephen Harris (Toronto: Dundurn Press, 2001), 229.

16. Jockel, *No Boundaries Upstairs*, 58–9.

17. Ann Denholm Crosby, "A Middle-Power Military in Alliance: Canada and NORAD," *Journal of Peace Research* 34, no. 1 (February 1997): 40. Available online at http://jpr.sagepub.com/content/vol34/issue1/ (accessed May 20, 2009). Janowitz outlined this concept in *The Professional Soldier A Social and Political Portrait*.

18. James MacDonald Minifie, *Peacemaker or Powder-Monkey: Canada's Role in a Revolutionary World* (Toronto: McClelland & Stewart, 1960), 99.

19. I found this item in several Directorate of History and Heritage files including: 73/1223 Raymont Collection Series 1 File 8 *Chairman Chief of Staff Air Defence of Canada* 12/28/50 – 01/29/54 and 73/1223 Raymont Collection Series 2 File 1/05 *Chairman Chief of Staff and Chief of Defence Staff Anti-aircraft defence and Air Defence.*

20. Andrew Richter, *Avoiding Armageddon: Canadian Military Strategy and Nuclear Weapons, 1950-63* (Toronto: UBC Press, 2002), 43–5.

21. Joseph T. Jockel, *Canada in NORAD, 1957–2007: A History* (Montreal & Kingston: McGill-Queen's University Press), 2007.

22. These concerns were particularly strong after the American Secretary of State, John Foster Dulles, stated in his "Massive Retaliation" speech in 1954 that the strategy of the United States would be to rely on its "great capacity to retaliate, instantly, [with nuclear weapons] by means and at places of our choosing." Quoted from John Newhouse, *War and Peace in the Nuclear Age* (New York: Alfred A Knopf, 1989), 95. Along with other world leaders, Lester Pearson was critical of this speech, since he was worried that the Americans did not plan to consult with their allies before they used nuclear weapons. Jockel, *No Boundaries Upstairs*, 86.

23. It should be noted that the position of the Minister of National Defence was different under Prime Minister John Diefenbaker. As Air Chief Marshal Miller stated: "George Pearkes was not a good politician and tended to think very much like the soldier he had been. For him, if a decision made sense from a military point of view, he supported it and did not take into account its political ramifications." Oral History Interview of Air Chief Marshal Frank Miller by Dr. Reginald Roy, 1967-06-20, Libraries and Archives Canada, 1979-0151. In addition, both Pearkes and his successor, Douglas Harkness, also had to defend the interests of the military in the Cabinet from the Secretary of State for External Affairs, Howard Green, and his campaign for nuclear disarmament.

24. Quoted from Escott Reid, *Radical Mandarin: The Memoirs of Escott Reid* (Toronto: University of Toronto Press, 1989), 159.

25. Norman Hillmer, "O. D. Skelton: Ambition Under Control," Foreign Affairs and International Trade Canada, available online at http://www.international.gc.ca/odskelton/articles_hillmer.aspx (accessed September 1, 2006).

26. C. P. Champion, "Marriage of Minds: Isabel and Oscar Skelton Reinventing Canada" (Book Review), *American Review of Canadian Studies* 36, no. 1 (Spring 2006): 143(3). He also expressed similar views his article "A Very British Coup: Canadianism, Quebec, and Ethnicity in the Flag Debate, 1964-1965," *Journal of Canadian Studies* 40, no. 3 (Fall 2006): 68–99.

27. Gordon T. Stewart, *The American Response to Canada Since 1776* (East Lansing, MI: Michigan State University Press, 1992), 154. The Ogdensburg agreement created the Permanent Joint Board on Defence.

28. Vincent Massey, *What's Past is Prologue: The Memoirs of Vincent Massey* (Toronto: The MacMillian Company of Canada Limited, 1963), 371.

29. Memorandum to Prime Minister, Dec 22 1941, *DCER*, Vol.9, 1126; R. D. Culf and J. L. Granatstein, *Ties That Bind Canadian-American Relations in Wartime From the Great War to the Cold War* (Toronto: Samuel Stevens & Company, 1977), 105.

30. For example, Escott Reid expressed concerns that Canadian sovereignty would be harmed if USAF stationed fighters at Torbay. He concluded that "if one RCAF fighter squadron were assigned to St. John's, and only if an RCAF squadron were provided, we could make a strong case for a reasonable voice in the defence of Newfoundland and ensure that the responsibility for the protection of Canadian territory remains in Canadian hands." Memorandum from Deputy Under-Secretary of State for External Affairs to Secretary of State for External Affairs, April 21, 1952, *DCER*, Vol. 18, 1952. Available online at http://www.international.gc.ca/department/history-histoire/dcer/details-en.asp?intRefId=4231 (accessed November 30, 2008).

31. David Bercuson, *True Patriot: The Life of Brooke Claxton, 1898–1960* (Toronto: University of Toronto Press, 1993), 246–57.

32. For example, James Eayrs noted that Foulkes "was at home in a government office as in a field caravan." Eayrs also stated that Foulkes had "developed a feeling for the political aspects of defence" to the point that General Guy Simmons asserted after his retirement that the Chiefs of Staff Committee was structured "to protect the government against the receipt of unpalatable advice." Quoted from Eayrs, 62.

33. Indeed, George Ignatieff complained about the close relationship that General Foulkes had with "Brad" and "Rad." George Ignatieff, *The Making of a Peacemonger: The Memoirs of George Ignatieff* (Toronto: University of Toronto Press, 1985), 186.

34. Jockel, *No Boundaries Upstairs*, 91.

35. Ibid., 59.

36. Lindsey, 67.

37. Allan D. English, "Rethinking 'Centralized Command and Decentralized Execution,'" in *Air Force Command and Control*, ed. Douglas L. Erlandson and Allan English (Toronto: Canadian Forces College, 2002), 77–8.

38. Lindsey, 67. The Europeans also did not want to be responsible for North American air defence. Ibid., 68; Roussel, 209.

39. Joseph Jockel, "The Military Establishments and the Creation of NORAD," *American Review of Canadian Studies* 12, no. 3 (1982): 5.

40. Roussel, 216. This military study group had been created in 1953 to allow for the exchange of data and to conduct studies on proposed air defence projects. Ibid., 194.

41. Campney cited in Jockel, "The Military Establishments and the Creation of NORAD," 5.

42. Ibid., 6. As Joseph Jockel noted this unofficial information came from the RCAF.

43. Jockel, *No Boundaries Upstairs,* 100-01; Jockel, "The Military Establishments and the Creation of NORAD," 6–9. Quote from *No Boundaries Upstairs*.

44. Joel Sokolsky, "A Seat at the Table: Canada and Its Alliances," in *Armed Forces and Society* 16, no. 1 (Fall 1989): 21. Available online at http://afs.sagepub.com/content/vol16/issue1/ (accessed May 20, 2009).

45. Jon McLin, *Canada's Changing Defense Policy, 1957–1963: The Problems of a Middle Power in Alliance* (Baltimore: John Hopkins Press, 1967), 21.

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Chapter 8

Leadership in Preservation: Wing Commander Ralph V. Manning and the RCAF Historical Section 1961-1965

Edward Peter Soye

Each contribution to this volume explores the historical dimensions of leadership within the Canadian Air Force. For the most part, the selected examples focus on individual or institutional leadership in an operational context, be it at war or during periods of peace. This paper will take a slightly different path by examining a serving officer whose leadership was rooted in a commitment to the preservation and promulgation of Canada's Air Force heritage. As the head of the Air Historian's Office, Wing Commander (W/C) Ralph Manning was presented with an opportunity to orchestrate projects of historical value to the Air Force. At the start of his tenure as the Royal Canadian Air Force (RCAF) Air Warfare Historian, Manning was presented with a clear mandate to establish an institution to preserve the memory of Canadian military aviation heritage.[1] Using the resources available to the Historical Section, and by partnering with other departments, he made considerable progress towards this goal. Manning, with the support of the Air Force, made a concerted effort to trumpet Canadian heritage starting in the early 1960s. This proved unfortunate timing as they were also among the final years of the RCAF's existence. The then-Minister of National Defence, Paul Hellyer, felt that there were fiscal and efficiency benefits to be gained from integrating the senior leadership of the three branches of Canada's armed forces. Such integration has generally been assessed as a positive move; however, Hellyer, for a variety of reasons, did not stop at that stage. He went considerably further and attempted to eliminate the traditional service identities associated with the Army, Navy and Air Force through unifying them into the tri-service Canadian Armed Forces. The political climate immediately following unification was particularly inhospitable towards the establishment of a national museum dedicated to a former branch of the armed services. Ralph V. Manning warrants recognition as an exemplar of leadership in the Canadian Air Force because of his commitment to preserving air force heritage, despite such challenging circumstances.

An examination of three particular projects coordinated by the RCAF Historical Section will illustrate that W/C Manning successfully influenced others in order to accomplish his objectives with respect to preservation and heritage. Each of these undertakings went beyond simply perpetuating the existence of artefacts for the sake of antiquarianism. Regarding one of Manning's projects, E.B. Armstrong, Deputy Minister at the Department of National Defence, commented "the RCAF wishes to make more of its material of historic interest available for display to the public."[2] Manning consciously tied preservation to public displays or museum exhibitions that engaged those outside the Air Force community. The relevance of Manning's work takes on even more importance because preserved items of material, and more specifically, air force culture were paired with exercises in pubic relations that aimed to promote both an interest in, and subsequent study of, the RCAF and its history. The RCAF was unified into the Canadian Armed Forces in 1968, but it is important to keep in mind that the process of integrating National Defence Headquarters (NDHQ) was set into motion by legislation passed in July 1964.[3] As part of Air Force Headquarters (AFHQ), the RCAF Historical Section was amalgamated into the new tri-service Directorate of History (DHist) in 1965.

A focused examination of the RCAF Historical Section during the final years before its amalgamation will illustrate a conscious attempt by the Air Force to promote its past achievements. This runs contrary to a common perception that the Air Force was not particularly conscious of its own heritage or concerned for the traditions that were stripped from it by unification in 1968.[4] In reference to the early post-war efforts to commemorate and examine the RCAF's past through an official history, Tim Cook has said "it is clear that senior air force officers saw its value. In the end, though, they were not willing to pay the price."[5] The lack of an official history was an ongoing barrier to broader academic study of air force history in Canada. Indeed, the fourth volume of the RCAF Official History (to deal with the years 1945-1967) remains unwritten to this day for much the same reason—a lack of financial commitment by the Air Force.[6] By the early 1960s, the RCAF was willing to allocate resources to celebrate its history and heritage; however, their vision took the form of a national Air Force museum rather than written history. From 1961 until its dissolution, the Air Council empowered the air historian to promote the Air Force and its culture. To accomplish this, W/C Ralph Manning placed a strong focus on RCAF museum policy as part of the Historical Section's mandate.

Of the three projects discussed in this paper, one stands out as the most significant, both in scale and in importance. Shortly after he took over the position of air historian in 1961, W/C Manning noted that the "Air Council [has] decided that it should be airforce [*sic*]policy to establish a central airforce museum, probably at Rockcliffe, of the type that the USAF [United States Air Force] has at Wright Field (Minutes of Air Council 7/61 15 Feb 61 Item 34)."[7] There was recognition that a Canadian equivalent to the USAF Museum in Dayton, Ohio could not be created overnight.[8] As a first step, Manning decided to utilize the National Air Force Day (NAFD) celebrations at Rockcliffe as a venue to display historic aircraft in the possession of the RCAF. Between 1962 and 1965 this temporary summertime display grew both in size and duration, ultimately including aircraft from the Brome County Historical Society (BCHS), the Canadian War Museum (CWM) and the early National Aviation Museum (NAM) at Uplands, and the RCAF. These displays achieved the practical goal of transporting aircraft from various collections and consolidating them at Rockcliffe in support of the ultimate objective of a national RCAF museum. Considerable public interest was attracted by these displays. The smaller Air Force Day display at Trenton attracted more than 30,000 people in 1963 and the national celebrations in Ottawa had an even larger attendance.[9] Such a positive response helped to strengthen the argument in support of establishing a permanent air force collection to build upon the success of summertime displays.

In addition to the temporary summer displays that were unveiled at the National Air Force Day each year at Rockcliffe, Manning and the Historical Section took other intermediate steps towards the ultimate goal of a national museum. A report from early in 1962 describes the second project to be discussed in this paper and states, "[i]t has been thought that an essential step in the development of an adequate display of RCAF equipment on a national scale would be the formation of museums at the command level. These would be small museums which would be operated within a command's resources and whose emphasis would be on the role of that command."[10] Only Training Command (TC), based in Camp Borden, responded to this call for the formation of museums at the command level. Over the next four years Manning oversaw the evolution of RCAF museum policy and championed both the Rockcliffe and Borden projects. The centennial of Canadian confederation in 1967 happened to coincide with the 50th anniversary of military aviation in Canada. At this time the Historical Section considered the initiation of Royal Flying Corps (RFC) flight training during 1917 to be the birth of military aviation in Canada. This combined celebration provided a useful target date of 1967 that influenced the planning of museum ventures in Borden and Ottawa. As it turned out this was also the last year that the Air Force wore its distinctive blue uniform that had identified it through war and peace. A growing appreciation that the Air Force's future was in question influenced the direction that Manning chose to steer museum policy. He accepted practical compromises to the 1961 objectives in the hopes of establishing a lasting institution to preserve air force heritage, even if a separate Air Force no longer existed to guide it.

The third relevant project is the RCAF's 1963 restoration and display of an original Fokker D.VII held by the BCHS of Knowlton, Quebec. Admittedly, the restoration of a German fighter left over from the Great War may appear an obscure topic, and one of questionable relevance to the preservation Canada's air force heritage. A detailed examination of this Fokker's treatment by the RCAF Historical Section will illustrate otherwise. Specifically, Manning's success in preserving air force heritage can be directly linked to the so-called "Knowlton Fokker" through the methods he employed to bring people and organizations together. The Fokker project solidified a network of partners who shared his perspective on the importance of preservation, several of whom joined Manning on the committee that shrewdly steered the Rockcliffe museum project. Thus, this paper will begin by contextualizing and examining the interplay between the Knowlton Fokker and the Air Historian's Office, both before and after Manning assumed the position of Air Historian at RCAF Headquarters.

From 1945 until 1960 the prime mover in the Historical Section was not Ralph Manning, but rather his predecessor, W/C Fred Harvey Hitchins. A brief discussion of Hitchins' background is necessary to explain why he is not the topic of this paper and to contextualize the state of affairs in the RCAF Historical Section when Manning took over in 1961. Hitchins' interest in the study of Canadian aviation history dates from the 1930s when he was a professor of History at New York University.[11] Considering he was an early devotee to the study of air force history in Canada, Hitchins warrants recognition as a leader in his own right. He made an immense contribution to the early study and writing of air force history, both during and after the Second World War. Details of his efforts in the context of the wartime and post-war RCAF Historical Section can be found in Tim Cook's *Clio's Warriors: Canadian Historians and the Writing of the World Wars*.[12] For the purposes of this paper, however, the critical point is that Hitchins' leadership

manifests itself in the form of written history, as opposed to Manning's focus on preserving and displaying physical artefacts.

While Fred Hitchins' meritorious service with the Air Historian's office received little recognition during his lifetime, particularly from the Air Force itself, this oversight was partially redressed in 2007 by his induction into the Canadian Aviation Hall of Fame. To date, no such accolades have been accorded to Ralph Manning. In order to understand this discrepancy one need only look to their respective backgrounds. Whereas Hitchins put his professional expertise as an academic to work at the RCAF Historical Section, Ralph Manning's background was that of an accomplished wartime pilot. He took over the Air Historian's Office in 1961 as a decorated airman, but one with little or no formal training as a historian.[13] With this in mind it is understandable that Manning's focus was not on written history, but rather on preserving tangible reminders of Air Force heritage.

During the Second World War, Hitchins worked diligently under Group Captain Kenneth Conn and focused a great deal of effort on preparing narratives intended to facilitate the writing of an RCAF official history after the war.[14] He was also a major contributor to the popular histories of the RCAF published under the series title *The RCAF Overseas*.[15] Shortly after the war, the Air Historian's Office was cut from 32 to 14 officers, just as Hitchins replaced Conn at the head of the section.[16] Less than a year later the staff was further reduced to Hitchins and a lone secretary who were left to catalogue the immense wartime records of the RCAF and continue work on the proposed eight-volume Official History.[17] Early in 1947 the Minister of National Defence, Brooke Claxton, was tasked by Prime Minister Mackenzie King to reduce the Defence Department's budget. Claxton was of the opinion that the public would have little interest in reading books about the Second World War after 1947 or 1948. As a result, he and the cabinet decided that no funding would be allocated to official histories after 31 March 1948.[18] Despite this disappointing turn of events, Hitchins continued behind-the-scenes preparations for an eventual official series. Only after his retirement from the RCAF was some of this work published, not by the military, but rather by the CWM as the second paper in its *Mercury Series*.[19] The year 1948 was a major setback as far as an official history was concerned, but it also saw the inaugural issue of *The Roundel,* an RCAF magazine that provided an alternate outlet for Fred Hitchins' historical studies. Practically every issue included content directly attributable to Hitchins, or heavily influenced by his work. Research for just such a *Roundel* article prompted the first official historical interest in Knowlton's German fighter, Fokker D.VII (Alb.) 6810/18, since Sir Robert Borden unveiled it there on 26 August 1921.[20]

In March 1953, W/C Hitchins received a letter from Arnold M. Feast asking for general information about Anthony Fokker and his 1918 fighter, the D.VII.[21] Feast joined the RCAF in 1937 and served during the Second World War as a pilot. He was downed in March 1943 and spent the remainder of the war in various prisoner of war camps, including Stalag Luft III.[22] After the war, Flight Lieutenant Feast remained active within the RCAF Auxiliary and contributed several articles to *The Roundel*. Only the first two paragraphs of his Fokker D.VII article, *Achtung – DVII!*, specifically address Knowlton's 6810/18.[23] In contrast, the letter exchange between Hitchins and Feast is highly informative because the two devote considerable discussion to the origins of this aeroplane. Such a dialogue developed because the actual origins of this Fokker in the Eastern Townships had faded from memory during the interwar period.

Local lore credited Senator George G. Foster with bringing this aircraft to Knowlton. The published account of the Brome County Historical Society's 22nd Annual Meeting of August 1919 simply recounts, "Senator Foster report[ed] that he had secured one of the large German aeroplanes captured during the war" and he proposed that it be "dedicated to the boys from Brome County who were members of the Aviation Branch of the British Army, during the Great War."[24] It so happened that one of the eight young airmen eventually named on the tablet was Lieutenant George Buchanan Foster, D.F.C. (Distinguished Flying Cross) – the senator's son. When Arnold Feast began inquiring about Knowlton's German fighter in 1953, he was informed that:

> [i]t was apparently shot down by the son of the (then) Senator Foster in late '18… Evidently young Foster gleefully came into possession of this machine either before hostilities ended or after. Through, it is suspected, the good political graces of his Dad, Junior was successful in getting the 'plane aboard a Transport and had it spirited back home. He actually flew it in and around Montreal during 1919 and 1920 before handing it over to the Museum.[25]

Feast admitted that most of this tale was hearsay, but regardless, it aroused Hitchins' curiosity with respect to the actual provenance of 6810/18.

A month later Fred Hitchins replied to Feast indicating that "I was able to track down our old 6810 as definitely one of the war trophy kites which was sent out to Canada in June 1919 so that disposes of the pretty 'Foster legend' as to its origin."[26] This documents what is probably the earliest archival research into the history of the Canadian war trophy aircraft. Accompanying Hitchins' own file copy of the reply to Feast, quoted above, is a sheet of handwritten notes outlining aircraft in the custody of the Canadian Air Force (CAF) in 1919. Based on this note, and on Hitchins' correct identification of the shipping date of 6810 as June 1919, it seems quite likely that Hitchins examined the original ship's manifest for the Canadian Pacific Ocean Services *Batsford*.[27] A detailed examination of the other documents in this file makes clear that the packing and shipment of German aircraft to Canada were among the major tasks undertaken by the CAF in England.[28] Based on available evidence it appears that Hitchins' interest was limited to discrediting what he referred to as the "Foster Legend" as an explanation of the Knowlton Fokker's origin, rather than conducting further research into the topic of war trophy aircraft.

The legend of Foster's son as the source of Knowlton's Fokker was entirely fictitious. Yet the Senator himself was actually the prime mover behind the allocation of 6810/18 to the Brome County Historical Society. The account provided in the *Transactions of the BCHS* was entirely accurate when it stated that Senator Foster secured one of the large German aeroplanes captured during the war. Within weeks of the Armistice of late 1918, Sir George Foster wrote to Arthur G. Doughty, the Director of War Trophies, "on behalf of the Corporation of Knowlton" asking "for souvenirs of the War as we may fairly be entitled to."[29] Both men had considerable status in Ottawa; Doughty as the long-standing Dominion Archivist and Foster as a senior politician who, prior to receiving an appointment to the Senate, served as Acting Prime Minister in Robert Borden's absence.[30] After 6810/18 was shipped from Camp Borden to Brome County on 27 May 1920, Foster again wrote to Doughty to thank him for allocating an aeroplane to Knowlton and added, "I quite appreciate that I am deeply indebted to you."[31] Thus the lore regarding Knowlton's D.VII was correct to associate the acquisition of the aeroplane with the elder Foster. The precise details faded from memory after Senator Foster's death in 1931 and the hearsay revolving around Foster's son filled the void as an explanation of the machine's origins. Hitchins was on the right path to uncovering the history of 6810/18 by examining the relevant archival records, even if he did so with limited objectives.

Despite Hitchins early interest, the RCAF Historical Section's interest in Knowlton's 6810/18 was not focused on this aircraft again until 1961, when W/C Ralph Manning took over from the venerable Fred Hitchins. The latter had taken up a teaching post at the University of Western Ontario (UWO), but the two men kept in regular contact. In a letter to Hitchins during March 1962, Manning informed him that "[m]useum policy has become my responsibility. We hope to get some of our museum aircraft on display soon, even if for only a special occasion such as National Air Force Day at Rockcliffe."[32] As late as 1963, documents from the Defence Council indicate that "[e]ventually it is hoped that nine volumes of official histories can be written which will record the part played in Canadian history by the RCAF. Approval has been given in principle to raising the strength of the Air Historian to 11 so that a start can be made on this endeavour."[33] The planned expansion of the section was not fully accomplished prior to its assimilation into DHist in 1965. Manning was well aware of the limited resources he could bring to bear on the task of an official history and thus, by 1963, had already placed increasing focus on the museum portion of the Historical Section's mandate.

One of the early steps towards a national Air Force Museum was a temporary summertime display of historic aircraft in Rockcliffe. Manning trialled the concept there in 1962 at the National Air Force Day celebration. During the planning for the event, W/C Manning proposed that L.F. Murray, secretary and curator of the CWM, make initial contact with the Brome County Historical Society regarding a possible loan of their Fokker D.VII. Both of these men sat on a committee that was set up in the opening months of 1962 by the deputy ministers responsible for the RCAF (National Defence) and the National Museum of Canada (Northern Affairs and National Resources). The RCAF held a number of historic artefacts and airframes and it was hoped that joint planning between the CWM and the RCAF would ensure the best selection and presentation of Air Force material for a public display.[34] Acting on Manning's direction, Murray contacted the BCHS and requested that they consider loaning their prized Fokker D.VII to the RCAF. Manning probably used this opportunity to informally gauge the potential of eventually incorporating this irreplaceable relic of the Great War into the Air Force museum. He quickly realized that the BCHS was highly protective of its aircraft and that a short loan was the best he could expect to achieve. Even so, a Fokker D.VII would nonetheless be a unique addition to the Air Force Day display in Rockcliffe. Perhaps most importantly, it would allow for conservation work to be performed on the aircraft, as it was showing considerable wear from its long journey to Knowlton and 40 years on public display at the BCHS.

If such a proposal was agreeable to the Society, the Air Force would agree to cover all costs associated with transporting the aircraft and would complete any necessary repairs before putting it on display.[35] A special meeting of the BCHS was called in Knowlton on 11 May 1962 to discuss the proposition before them.

This was not the first time an outside organization had approached the keepers of 6810 about removing it from Knowlton. More often than not, such inquiries took the form of letters from the United States asking if the BCHS was interested in selling the aircraft. As Harry Shufelt, president of the BCHS, told Murray, "we are very loath to let the plane go out of the museum and have refused requests in the past."[36] According to Arnold Feast, the producers of Howard Hughes' epic film *Hells Angels* (1930) offered the BCHS a considerable sum for the aircraft.[37] Such an offer is entirely plausible considering the instructions that the millionaire Hughes gave to one of the pilots and aviation consultants on the film, Frank Tomick. "He told me he needed a bunch of planes, Camels, S.E.5's, D.VII Fokkers. 'Get all you can.'"[38] Ultimately Tomick was able to acquire five authentic Fokker D.VIIs that were flown during the filming.[39] Knowlton had no interest in selling their aircraft to Hughes, particularly since it had been unveiled in the Martin Annex of the BCHS only six years earlier. In contrast, the offer from the RCAF in 1962 was taken under consideration for several reasons.

The prime consideration from the perspective of the BCHS membership was that they felt 6810 would be well taken care of by the RCAF. After 45 years with little or no maintenance, the aircraft was showing considerable wear and tear. A secondary, but no doubt important feature of the loan was that they hoped it would bring them some much-needed publicity. The Society required the Air Force to agree, in writing, to very specific conditions before the Fokker was allowed to leave Knowlton. The aircraft was to be returned and installed in the museum no later than 16 June, so that it would be on display when the BCHS opened for its regular summer display season. While on display in Ottawa, there was to be suitable signage indicating that the aircraft was on loan from the BCHS, where it was normally on permanent exhibition. Finally, there were very particular instructions with respect to the aircraft's fabric covering. Based on information they had received from a member of the Royal Aeronautical Society, the BCHS was (rightly) under the impression that this Fokker D.VII was the only example extant that retained its original fabric covering—linen fabric pre-printed with the German "lozenge" camouflage pattern. Thus, their instructions to the RCAF were "that the fabric will not be taken off nor repainted or changed in any way EXCEPT [original emphasis] where it is damaged and has to be restored. Where such restoration is made the fabric put on is to be made to match the original fabric as nearly as possible."[40] So long as all of these conditions were met, the Society was willing to enter into an agreement with the RCAF for the loan and cosmetic restoration of D.VII 6810/18. The desire to preserve 6810's originality as an artefact was a primary consideration for both Manning and the membership of the BCHS.

By the time Manning and Murray received Shufelt's reply and acceptance of their offer there was less than a month remaining before the Air Force Day display of 9 June 1962. Simply transporting the aircraft and assessing its condition would be difficult to do in such a short period, let alone locating and applying linen printed with a German camouflage scheme not available since 1918. Murray thanked the BCHS for their kindness and cooperation, but it was necessary to put the project on hold. After Air Force Day had passed, Manning visited Knowlton in order to meet with Shufelt and inspect the German fighter in their collection. In this June visit, he reiterated a desire to display the aircraft in Ottawa and proposed the 1963 Air Force Day as a suitable target. Once a mutual understanding was in place between the RCAF Historical Section and the BCHS, Manning's focus shifted toward coordinating support from other organizations whose contributions would be required to successfully carry out the operation. One of the first steps was to make inquiries regarding potential sources of lozenge fabric. When Manning wrote to Shufelt as a follow up to his visit, he enclosed a photograph of a war trophy D.VII in Toronto during 1919.[41] It was the first of many photographs sent to Brome and it served a twofold purpose. At face value, it was a kind gesture to help build the BCHS's archive of information relating to their aircraft. At another level, the photos served to illustrate the distinctly Canadian history of their German aircraft as a trophy of the Great War, of which the Knowlton machine is the last surviving Fokker.

The photograph showed Victoria Cross winner William George Barker sitting in a Fokker D.VII that he flew in the Toronto-New York Air Race of late August 1919. Barker performed demonstration flights over Toronto's Canadian National Exhibition during the so-called "Victory Year" in the captured Fokkers. These displays brought a sample of aerial fighting to people on the home front. During the war, the Canadian public developed an insatiable appetite for tales of war in the air. Newspapers eagerly catered to this desire for stories about the new phenomenon of aerial warfare.[42] Barker's displays in 1919 were literally a personification of this individualized combat and they were made possible by the availability of Fokker

D.VII's that Arthur Doughty had secured for the war trophy collection. Just as the keepers of 6810/18 had forgotten the details of how they originally acquired the machine, they knew little of its history as a Canadian artefact. Manning's inclusion of photographs that alluded to this history was a subtle means of elucidating the significance of these Fokkers to air force history in Canada.

By September 1962, Ralph Manning was still trying to navigate the administrative channels in Ottawa to secure permission to proceed with the loan of the Fokker. The Air Historian had hoped the loan would be a relatively simple process. Unfortunately, some unexpected administrative hurdles, particularly the question of funding for the project, were delaying ultimate authorization to proceed. He took the opportunity of this delay to send another photo to Knowlton, this time one that showed the way captured Fokker D.VIIs were used by the CAF in England.[43] The CAF was the first distinctly Canadian air service and No. 1 Squadron, a scout unit, was equipped with Sopwith Dolphin aircraft in early 1919. The Dolphin was not highly regarded by the experienced airmen of the CAF and thus, before they shipped the Fokkers in their care to Doughty, a handful of D.VIIs were regularly flown in lieu of their issued Sopwith machines. The mounted photograph Manning sent to Knowlton showed Andrew McKeever, commanding officer of No. 1 Squadron, sitting in a Fokker D.VII that had been emblazoned with the insignia of the unit, a green maple leaf, outlined in white and overlaid with a white "1." He thus underlined, perhaps unknowingly, the fact that 6810/18 was one of the first aircraft ever to be flown by Canadians in their own distinct air service and the last surviving machine worthy of such a title.

Harry Shufelt was pleased to receive these photographs and added them to the BCHS's archive of information pertaining to the Fokker D.VII. The June meeting between the two men left the president of the Historical Society with a positive impression of Manning. When he wrote back to the wing commander, Shufelt said, "I hope that you will be coming to Knowlton when the plane is to be loaded as I would like you here to supervise the loading if at all possible."[44] Unconventional requests have an unfortunate tendency to become entangled in Ottawa's bureaucratic channels. Due to the unprecedented nature of the arrangement regarding Knowlton's Fokker, it took considerable effort on Manning's part to secure formal authorization. As late as mid-December 1962, he wrote to Shufelt apologizing for the pace at which the project was moving.[45] Early in the new year, permission to carry on with the project was finally granted. Manning and Shufelt agreed it was best to wait until late March or early April to remove the aircraft because while much of the snow would have melted, the ground would still be sufficiently frozen to support heavy trucks. It had taken over a year of patient effort on the part of W/C Manning to reach this point. With an agreement from the BCHS and formal authorization from his chain of command, the project could finally proceed. He next worked in concert with a host of organizations and departments outside of the RCAF Historical Section to draw up a detailed plan of action.

The Air Historian's dialogue with the BCHS has been outlined here in detail to illustrate the methods employed by Ralph Manning to accomplish his goals. He devoted much effort to developing a personal rapport and earning the respect of Harry Shufelt through their regular letter exchange. He cemented this relationship by making a personal visit to the shores of Lac Brome. The inclusion of a Christmas card to Shufelt and his wife added a personal touch to the correspondence flowing between Knowlton and Ottawa. At the same time, the photographs selected by Manning artfully served to illustrate the history and Canadian importance of the artefact held by the Society. Shufelt's desire to see Manning present during the removal of the aircraft, in addition to the BCHS's very agreement to loan the aircraft to the RCAF, provide evidence that the wing commander had earned his respect and trust. Using similar methods during the first half of 1963, Ralph Manning was able to secure the cooperation, and perhaps more importantly, accessed resources available to many people outside his own office. One example was a mill in New York that indicated it could provide a reasonable facsimile of lozenge fabric. The material was based on a run the mill had produced some years earlier for re-covering of a Fokker D.VII at the Smithsonian's National Air and Space Museum (NASM) in Washington.[46] This material allowed Manning to comply with Shufelt's request that only similar fabric be used for the necessary patching. There still remained the question of expertise and manpower to transport the aircraft from the Eastern Townships to Ottawa and make the required repairs.

As the initial correspondence with the BCHS indicated, L.F. Murray of the Canadian War Museum was involved in the project from its inception. Held in the collection of the CWM were a handful of aircraft from the First World War. Many of these were also the result of Arthur Doughty's collection efforts both during and immediately after the First World War, including a Nieuport 12, the A.E.G. G.IV (a twin-engine German bomber), the Junkers J.1, and a Royal Aircraft Factory B.E.2c. Between 1957 and 1958, the

CWM called upon the RCAF to restore some of these aircraft. Number 6 Repair Depot (6 RD) in Trenton performed work on the Nieuport, the B.E.2c and on their Sopwith Camel.[47] Ken Molson subsequently criticized these restorations as not living up to modern standards; however, they set a precedent whereby 6 RD was the first unit contacted when the RCAF needed work done on a vintage aeroplane. Murray undoubtedly discussed these previous projects with Manning as they determined how to best deal with Knowlton's D.VII. Input was also sought from Kenneth M. Molson at the small, Uplands-based National Aviation Museum, which had only been opened in 1960. Perhaps an unexpected, but logical source of information was the National Gallery of Canada. A Mr. Ruggles of the gallery was able to share with Manning techniques used in the restoration and preservation of artwork.[48] Considering one of the main challenges in terms of the Fokker project was the preservation of linen covering stretched over a wood and steel frame, the art parallel almost seems obvious in hindsight. At the time, it took some lateral thinking on the part of Ralph Manning to contract the National Gallery for advice on the restoration of a German aeroplane from the First World War.

6 RD dispatched a mobile repair party during the last week of March 1963 to disassemble Knowlton's Fokker and transport it to Ottawa. W/C Manning was unable to join them as Harry Shufelt had hoped, but an experienced Air Force rigger by the name of Flight Sergeant (F/S) Huffman was placed in charge of the project. Shufelt was suitably impressed with the work of Huffman and his team, so much so that in his own words he described them as handling 6810 with "almost loving care."[49] A little over two months remained before the Air Force Day celebrations of 8 June 1963 and there were a number of challenges facing Huffman and his team at 6 RD. When they arrived at Rockcliffe with the Fokker, it was decided that the repair work required was more than could successfully be completed in Ottawa. The aircraft was moved to Trenton where the full facilities of the repair depot could be brought to bear on the project.[50] Without recounting the intimate details of the restoration, it is probably best to let Manning's own words describe the challenges that faced the restoration team. He wrote the following to the commanding officer of 6 RD:

> It is realized that with the short time left until Air Force Day that only first-aid and most urgent repairs can be made to the Fokker DVII. It is requested though, that thought be given to what should be ultimately done to this aircraft to fully restore it.
>
> On most old historic aircraft the decision has to be made eventually to remove the old fabric, repair the structure and, since the old fabric won't go back on the aircraft, new fabric must be used to cover the aircraft, and the old consigned to storage or a wall panel. This fate will come hard to admirers of the Knowlton Fokker, because it is the last Fokker DVII, so far as we know, which has a high percentage of original fabric, and it has been used for reference in the restoration of the Fokker DVII in Washington and the one in London. A way to avoid this sad ending may be in techniques used by the National Gallery in restoring old paintings in its workshops.
>
> The problems are not dissimilar. Brittle and torn painted canvas has to be rejuvenated without damaging the paint and holes closed and smoothed. Usually the old canvas bonded to a new canvas with an adhesive and joints treated so that they are almost invisible. The gallery was asked to give advice on the Fokker and while it was at Uplands it was inspected by Mr Ruggles, who expressed the opinion that it was quite possible that the techniques used in the Gallery might be applicable to the old problem of old aircraft and he made some suggestions on solvents which were passed to you.
>
> It is requested that the practicality of bonding old fabric to new fabric be investigated, first, by experimenting with small strips of fabrics and, if these initial experiments prove successful by taking one small section of the aeroplane, covering it with new camouflage fabric, making it taut, and applying the old fabric, or strips of fabric, to the new outer surface of the aircraft much as wallpaper is put on a wall. The area that should be used, if it is decided that it is a workable proposition, is the section of the left-hand side of the fuselage immediately to the rear of the cockpit – the area discussed by W/C Hemsley, Mr Molson and W/C Manning.
>
> The National Gallery will assist with technical advice on request. The man to telephone or to visit is Mr Ruggles.[51]

In this single letter, Manning made clear his appreciation of the aircraft's value as an artefact and stressed the need to preserve its originality as far as possible. He also alluded to the fact that the RCAF personnel working under his direction were pioneering an entirely new technique in the field of vintage aircraft restoration. Considering there were only two months in which to carry out the whole project, and the incalculable value of the artefact in their possession, this was a tall order. Through the collaborative

efforts of the Air Historian's Office, the BCHS, CWM, NAM, 6 RD, the National Gallery and others, the project was successfully accomplished. Despite his own assessment that it was only about a "65% restoration and good for 6-7 years,"[52] the Fokker was extremely well received by the visitors to Air Force Day, both in Trenton and Ottawa.

Harry Shufelt and the BCHS were also entirely satisfied with the exchange with the RCAF. Shortly after the D.VII was reinstalled in Knowlton by F/S Huffman (before the agreed upon date of 15 June), he wrote, "I wish to tell you how pleased we are that we decided to loan our Fokker D VII …We have greatly benefited from your kind action in having the Fokker taken for the National Air Force Day Celebrations."[53] Such a success was largely achieved because the arrangement surrounding 6810 was beneficial to each of the principal parties. The BCHS received significant publicity and professional Air Force riggers and fitters restored their prized German aeroplane. Manning and the RCAF Historical Section were able to incorporate an extremely rare aeroplane into the successful display of vintage aircraft during Air Force Day 1963. From the broader perspective of RCAF Museum policy, the exercise of coordinating the Fokker affair set the tone for future cooperation between Ralph Manning, Lee Murray and Ken Molson.

Early in 1962, the RCAF and the Air Historian's Office were eager to proceed with the development of a national Air Force museum in Ottawa. A strong sense of Air Force identity and pride, flowing from the highest levels of command, is evident in the correspondence regarding this objective. The early negotiations with the BCHS concerning their Fokker D.VII took place in the context of Manning's overall goal of commemorating the Air Force. Several years after the project, Manning reflectively commented, "I continue to be strongly of the opinion that the restoration of the Knowlton Fokker D VII by 6 RD a few years ago was a major breakthrough in the preservation of old, fabric-covered aircraft, and it is a pity that is hasn't received the publicity it deserves."[54] He undoubtedly felt this way during his time as Air Historian and perhaps believed that the experience gained by the RCAF during the 6810/18 project could be pointed to as an example of their leadership in the field of aircraft restoration. With this in mind, the Air Force might be viewed as the natural custodian of the collection he sought to consolidate in Rockcliffe. There was also an acknowledgment that national museums fell under the purview of a different federal department. Thus a compromise in the eventual running of a National RCAF Museum was necessary. Manning described the situation by noting:

> The biggest change in policy during the year has been the decision not to rely exclusively on the National Aviation and the Canadian War Museum for the development of a major display of RCAF material of historic interest. A wish was felt that a central airforce museum could be established in this country comparable to the United States Air Force museum at Wright-Patterson Air Force Base with its extensive ground display of USAF equipment including aircraft. The operation of museums on a national scale in Canada, however has been a responsibility of the Department of Northern Affairs and National resources [*sic*] and it has been recognized that an interdepartmental agreement would be needed for the successful establishment of a museum of the size that has been envisaged. The part that each department would play might be that the Department of National Defence through the RCAF would identify, catalogue, store and recondition material for the museum and take the initiative in selection and making available a suitable site for the museum; and that the Department of Northern Affairs and National Resources would administer the facility. Detailed policy on the collection and eventual display of RCAF equipment would be worked out by an AFHQ Committee which has been formed under the chairmanship of the Air Historian.[55]

Or, in other words, the Air Force sought to create a national museum that would satisfy their vision with respect to RCAF heritage and place it under the continuing guidance of a committee led by the Air Historian. At the same time, they hoped that the day-to-day running of the museum could be administered and presumably paid for by the Department of Northern Affairs and National Resources, much as the various sub-components of the National Museum of Canada were during this period (including the Canadian War Museum).[56] Based on the realization that interdepartmental approval would take some time to arrange, Manning utilized the intervening period to help facilitate the establishment of a TC museum in Borden.

As with the proposed national museum in Rockcliffe, the origins of the Borden museum lie in the above-cited Air Council minutes of 15 February 1961. While each of the RCAF Commands was authorized to consider the formation of a museum, only RCAF Station Camp Borden indicated interest in doing so. In large part, this desire for a museum was seen as a way to preserve hangars that were built by the RFC in Canada during 1917. According to AFHQ development plans dated 1 April 1958, all 14

of the Great War-era hangars in Borden were slated for eventual removal. In April 1962 it was noted that the "complete elimination [of Borden's original hangars] will also result in the loss of a historical link with the origin of flying in Canada … by the RFC, RAF [Royal Air Force], CAF and RCAF, all of which have, at some stage, carried out training at that station."[57] By the start of 1963 it was agreed that TC should proceed with the establishment of a museum in Hangars 9 and 10. Beyond the selection of two hangars for preservation and the preliminary collection of historical relics at the station, very little was actually done. This was in large part due to a lack of outstanding funding, as per the original stipulation that such museums be funded by the relevant command. A target date of 1967 was eventually set for the opening of the TC museum to celebrate the Centennial and the 50th anniversary of military flying in Canada.

To complement the preserved hangars, and to form a centrepiece for these celebrations of Canadian military aviation, it was decided to build a full-scale flying replica of the JN-4C "Canuck." Canadian Aeroplanes Limited was one of the companies operated by the Imperial Munitions Board during the Great War and they built almost 1,200 Canucks at their Toronto plant.[58] Ken Molson of the National Aviation Museum offered to provide an operational OX-5 engine for the project, and $5,000 worth of other materials was required. Considering Hangars 9 and 10 were used to house JN-4s during the last two years of the First World War, the Canuck project was a most appropriate way to commemorate that heritage. There was also a recognition that:

> a considerable number of the personnel who were stationed at Camp Borden during the early years are still surviving. Unfortunately, as they are gradually passing away, it is considered imperative that the proposed intention to establish a TC museum be widely advertised and wherever possible, personal contact should be made with these people in an endeavour to procure historical items and information of historical significance.[59]

Such a plan to collect oral histories, preserve original material as far as it is extant (hangars and artefacts) and to construct accurate replicas of important missing items (namely a JN-4 aircraft) was a fairly comprehensive project of commemoration. Unfortunately, in the same document outlining a high-minded objective of perpetuating the memory of the early days of Canada's Air Force, there is also an acknowledgment that "plans for funding of this project are not known ... [I]t would seem that because of our current and forecasted tight budgeting position some difficulty could be encountered in seeking authority to have all costs charged to the DND budget."[60] W/C Manning was in complete agreement with the direction TC sought to take their museum, and he particularly supported the preservation of Borden's historic hangars. His role as the air historian was to ensure that the evolution of the Borden museum project unfolded in accordance with broader RCAF Museum policy. The RCAF Historical Section also served as an advocate in Ottawa for the allocation of funds to the TC Museum in Borden.

In the closing weeks of 1964, Ralph Manning wrote to the Secretary of the Defence Staff reiterating the current state of RCAF Museum policy. Citing the Rockcliffe and Borden projects, he specifically laid out the minimal funding that was required to support them. Regarding the Borden museum, he summarized aptly, recalling that:

> [w]hen the decision to establish command museums was made, it had been stipulated that everything that was done should be within command resources. When one considers the extent to which budgetary and establishment control has been centred in AFHQ, this probably was not a realistic requirement. TC's current request for money and the establishment of one position for a civilian curator at Camp Borden seems the only correct way to get a museum going if a museum is wanted.[61]

No further mention of a TC museum is to be found in the Air Historian's files regarding museum policy, likely because the Historical Section itself ceased to exist less than a year later. The JN-4 project never came to fruition; however, another training aircraft from the Great War ultimately did participate in the centennial celebrations. Number 6 Repair Depot restored a pair of AVRO 504Ks that were referred to as "Old Gold," and these aircraft toured the country along with the Golden Centennaries in 1967.[62] Regarding Borden's historic hangars, a brief postscript is necessary. From Manning's time as Air Historian until the present day, there remains an ongoing tension between the desire to preserve these structures and the fiscal commitment required from the Canadian Forces in order to actually do so. The historical significance of the original curved hangar line at Camp Borden is undeniable. When they were built in 1917, these structures were the first purpose-built aircraft hangars in Canada and housed the fleet of Canadian built Canuck aircraft that trained hundreds of Canadian and American aircrew for the Great War. Despite their original status as tentative structures, most of the hangars stood the test of time. Indeed,

many continued to support flight training during the Second World War when they were filled with Harvards, and again in the late 1960s when they housed de Havilland Canada Chipmunks. In recognition of this long-standing contribution to Canada's air force heritage, the 11 hangars that remained in 1989 were federally designated as a National Historic Site. Despite this status, three of the hangars were torn down in the 1990s, including Hangar 9, which was one of those earmarked for preservation as part of the TC museum.[63] In 1995, Hangar 11 was renovated and opened to the public as the Air Force Annex to the Base Borden Military Museum (BBMM). Admittedly, the Canadian Forces faced extreme budgetary challenges during the 1990s. In this context the preservation of Hangar 11 may have been viewed as a counterbalance to demolition of three other structures that formed part of this national historic site.

Today, the existence of an annual Air Force Historical Workshop and the publication of texts such as this one demonstrate an official recognition that understanding and studying the heritage of the Air Force in Canada is important. Yet at the same time, three more of Borden's historic hangars creep ever closer to oblivion. In the early part of the current decade, Hangars 10, 12 and 13 were vacated and steps were taken to hasten their deterioration. The heat was turned off while the water left on, leading to broken pipes and considerable water damage as the water froze during the winter months. With the spring thaw, mould began to spread. In addition, the siding was removed so that the elements could take their toll. As of fall 2008, the roof of Hangar 10 (the other structure destined to become a museum in 1967) had partially collapsed and it appears as if the relevant authorities are essentially waiting for the building to fall down, thereby avoiding the negative publicity associated with actively tearing down the structure. In some respects, the treatment of these small hangars over time is a useful litmus test for how far the Air Force is willing to go to protect its own history. Considering Borden is undeniably the birthplace of the RCAF and the home of military aviation in Canada, one would think that it should rank highly amongst heritage projects.[64] W/C Manning recognized this in the early 1960s, as did other senior officers in the air force of the day. The only commemorative undertaking that received more attention from the air historian was the attempt to establish a national RCAF museum in Ottawa.

In 1961, the Air Council outlined a vision of a national museum to preserve and champion the history of military aviation in Canada. From the outset, documentation from the Air Force alluded to the fact that such an institution should be housed at RCAF Station Rockcliffe.[65] This made eminent sense for two reasons; first, hangar space was expected to become available in 1964; and secondly, the site itself had been one of the first air stations set up by the Canadian Air Board after its establishment in 1919.[66] W/C Manning spent several years making the administrative arrangements both with his RCAF superiors and the relevant deputy ministers to secure the use of hangars at Rockcliffe. In doing so he utilized the same people skills he mustered in his efforts surrounding Knowlton's Fokker D.VII. The 6810/18 project also emphasizes the considerable effort he put into coordinating displays of vintage aircraft for National Air Force Day between 1962 and 1964, held each June at Rockcliffe. Air Force Day itself was useful because it demonstrated to the visiting public continuity in the Air Force's contribution to Canada. Modern aircraft juxtaposed with vintage biplanes highlighted the illustrious history of air power in Canada.[67]

To reinforce the importance of this past and to share it with a larger audience, there was a desire for the historic aircraft assembled for NADF in Rockcliffe to remain on public display during the summer months. This happened for a short period in 1963, and due to its success, a lengthened display took place the following year. The positive public response to both of these displays helped buttress Manning's arguments for the consolidation of all the historic aircraft belonging to the CWM, NAM and RCAF at Rockcliffe. In the spring of 1964, three of the double-bay Second World War-era hangars at Rockcliffe were allocated for just that purpose. Two were earmarked for the RCAF's collection of aircraft and the third was to house specimens from the CWM and the NAM.[68] The last Air Force Day celebration was held at Rockcliffe on 1 July 1964, after which the recently consolidated collection remained on display until early September.[69] That winter, W/C Manning chaired the last planning meetings with Ken Molson, Lee Murray and Jack Murphy regarding the historic aircraft now consolidated in Rockcliffe. The title "National Aeronautical Collection" (NAC) was first publicly used to describe this world-class assemblage of aeroplanes when the Minister of National Defence, Paul Hellyer, officially opened the Rockcliffe exhibition on 21 May 1965.[70] At this point the RCAF HQ and the Historical Section had already been integrated with the Navy and Army at the behest of the minister. Manning adjusted the objectives of the Section during his last year in the Air Force in response to a pragmatic realization that the RCAF's future was far from secure.

In his memoirs, Hellyer refers to 1 August 1964 as the "red-letter day when the RCN, the Canadian Army and the RCAF came under integrated management – integrated, not yet unified."[71] The RCAF

Historical Section was part of Air Force Headquarters under the Chief of Personnel Services (CPS), and thus was to be similarly integrated as part of the newly created National Defence Headquarters (NDHQ). It was not until mid-1965 that the Air Historian's office was actually merged into a tri-service Directorate of History. Under the guidance of the esteemed C.P. Stacey, the amalgamation went smoothly and by 1966 he returned to his teaching post at the University of Toronto.[72] He left Sydney Wise at the helm of the new directorate, but prior to his departure Stacey briefed Wise "on the difficulties of three independent military cultures coming together, and the clash of personalities between senior historians, especially D.J. Goodspeed (Army) and E.C. Russsell (Navy)."[73] As professional academic historians, Stacey and Wise both came from a background more akin to that of Fred Hitchins than Ralph Manning. With this in mind it is not surprising that Stacey felt the production of the long-awaited RCAF official history would provide a core job for the new DHist and "fill a thoroughly disgraceful gap in the national historiography."[74] Despite Stacey having secured authority to produce the Air Force Official History in 1966, it would be 15 years before Wise published the first volume, *Canadian Airmen and the First World War*. In the final years of the RCAF Historical Section, W/C Ralph Manning placed a clear emphasis on the establishment and implementation of Air Force Museum policy, rather than the preparation of written histories. He realized that his forte, museum policy, was not going to be a priority in the new DHist. As a result, Manning elected to retire from the RCAF and promptly took up the position of deputy director at the CWM under L.F. Murray, where he remained into the 1980s. In that role he was able to foster the preservation of air force culture and history through displays at the war museum, even if they were not on the scale that was intended in a national Royal Canadian Air Force Museum (RCAFM).

From the time of his appointment as Air Historian, W/C Manning worked toward the establishment of a national RCAFM that was to be under the guidance of the Air Force. Such an institution would have served the twofold purpose of preserving and publicizing Canada's military aviation heritage ranging from the time of the RFC in Canada during 1917 up to the present day. The consolidation of the CWM and NAM collections at an RCAF Station was intended as an intermediate step towards their eventual amalgamation into the RCAFM. The true scope of integration and unification under Hellyer became apparent to Manning during his final months in the RCAF. Once the Air Force Historical Section ceased to exist, there would be essentially no one to provide backing for the RCAFM project. Thus, in the hopes of perpetuating the gains that had already been made in the consolidation of the NAC, he began posturing for the Rockcliffe museum to move forward under non-Air Force leadership. He felt "[i]t would be wise, therefore, for the RCAF to retain some sort of control over museum policy until such time as a sizable aeronautical collection can be built up … we should then hand over complete museum control to some other organization."[75]

During the same challenging period there was also a realization that the Borden museum was unlikely to become a reality. In the hopes of preserving the most important aspects of the ill-fated TC Museum, calls were made for the transfer of the JN-4 replica project to the Centennial Committee. Even more drastic was the suggestion that the two historic hangars in Borden be disassembled, shipped to Ottawa and reassembled there. These suggestions ran contrary to the direction that Manning had carefully steered RCAF museum policy towards from 1961 until late 1964. They suggest considerable uncertainty on the part of decision makers regarding the future of the Air Force and a last ditch effort to implement some elements of RCAF Museum policy before it was too late. Ultimately, only the NAC was to survive the amalgamation of the Historical Section and the unification of the RCAF with the other branches of the service. Yet it did so by evolving into a considerably different organization than the one originally envisioned by W/C Manning and the Air Council in 1961.

With Ralph Manning's retirement from the RCAF and the dissolution of the Air Force Historical Section, L.F. Murray of the CWM and Ken Molson of the NAM were left to steer the direction of the NAC. While Manning was getting settled into his new role at the Canadian War Museum, another retired Air Force officer working for CWM, Squadron Leader Jack Murphy, was tasked with overseeing the day-to-day running of the collection in Rockcliffe. Ken Molson and his small staff initially played a subordinate role and were primarily responsible for the NAM displays at Uplands airport. In 1966, the NAM was absorbed into the new National Museum of Science and Technology (NMST) under the directorship of Dr. David M. Baird. The next spring the NAM's displays were transferred from Uplands to the "temporary" facility on St. Laurent Boulevard.

In 1967, flying displays were organized with a handful of NAC aircraft at Rockcliffe as part of the Centennial celebrations. In some respects these displays were a natural evolution of the NAFD celebrations

that Manning had organized from 1962 to 1964. During his final days as the air historian and as a new deputy director at the CWM, Manning helped with the planning of the Centennial Air Display. Despite the success of this event, 1967 was the swan song for significant portions of the heritage associated with Canada's Air Force such as the Air Force blue uniforms and the rank insignia the RCAF shared with air forces throughout the commonwealth. The Canadian Forces Reorganization Bill passed in the House of Commons on 25 April. Shortly thereafter "the three services celebrated their vanishing traditions in a giant Centennial tattoo. Even many unmilitary Canadians found it the most exciting spectacle of the year."[76] The RCAF Museum Policy that Manning championed during his time at the Historical Section had sought to preserve air force heritage in Canada. Just at the point when the consolidated NAC was on the verge of transformation into a permanent institution, its intended overseer, the RCAF, and its proud traditions were callously dispensed with.

One of the most visible manifestations of this change was the substitution of a bottle-green outfit derived from that of the USAF in place of the classic Air Force Blue uniform. Hellyer believed that "[t]he need for a common walking-out uniform was real. It was not, as some critics suggest, just a ministerial whim."[77] C.P. Stacey was in Ottawa during the lead-up to unification while he coordinated the new Directorate of History. In reference to the long-standing uniforms that Canadians had fought and died in, he reflected:

> it was painful to see it replaced by a green costume whose cut and colour suggested bus conductors or gas-station attendants. (The best thing the people who were forced to wear it … had to say for the outfit was that it was "good for office work." Incidentally, one of the changes of the period was the abandonment of the civilized old British tradition that officers of the armed forces employed at a static headquarters wore civilian clothes.)[78]

This old British tradition, like so many that were swept away by unification, casts doubt on Hellyer's claim regarding the real need for a common walking-out uniform. Integration of command at the highest levels had made operational sense, but the wholesale desecration of sound military tradition that came with unification was unjustifiable, wasteful and caused immeasurable damage to the ethos of Canada's armed services. Marc Milner has written, "Hellyer and presumably the airforce [*sic*]were excited about the prospect of a bottle-green USAF uniform."[79] Despite the fact that it was an individual Air Force officer, Air Commodore Garnet Jacobsen, who guided the design of the new uniform of the Canadian Armed Forces, this direction did not represent an overall institutional desire on behalf of the Air Force.

Manning developed an RCAF Museum policy that sought to preserve artefacts and aircraft that were no longer of use operationally, but that formed part of the heritage of Canada's Air Force. The RCAF uniform and ranks were just as much a part of that heritage, with the notable distinction that they remained functional as service dress and were a living component of air force culture. Those who wore this uniform were tangibly connected to their forbearers and displayed this heritage wherever they went. With an appreciation that some change was unavoidable, the RCAF Senior Advisory Group debated the best middle path the Air Force might take in the hopes of preserving traditional links to the past despite unification of the forces. After summarizing the arguments for and against the wholesale replacement of Air Force rank with that of the Army, the recommended conclusion was that "the RCAF adopt the CA [Canadian Army] office rank titles while retaining the present officer rank insignia."[80] This suggestion pre-dates the definitive ministerial directive regarding a common uniform and suggests a desire by the Air Force to retain traditions it could reasonably argue for; in this case, the light and dark blue rank insignia on traditional blue service dress uniforms.

In the short term, compromise solutions to perpetuate Air Force traditions as part of the new uniforms were a lost cause. Gold bars, more akin to airline captains than to serving Canadian airmen, demarcated officer rank in the new "air element" of the Canadian Armed Forces. Fortunately, the compromise approach that Manning took towards the future of the NAC was more successful. After the celebrations of 1967, the collection in Rockcliffe came under the control of the NMST, and along with Molson's NAM, took on the title "Aviation and Space Division." Eventually the whole of the NMST's aviation assets, the vast majority of which were from the Rockcliffe-based NAC, became informally known as the National Aviation Museum. The adoption of this name for the NMST's Aviation and Space Division has led to some confusion because it implies an artificial continuity between the NAM established in 1960 under Molson, and the institution that developed in Rockcliffe after the NAC's consolidation in 1964. This subordinate position of the Rockcliffe museum under the guidance of the Science Museum was entrenched by the 1968 National Museums Act. This new NAM, recently renamed to Canada Aviation

Museum (CAvM), was and remains the premier collection of historic aircraft in the country. In 1961, Ralph Manning wrote that:

> [o]n one point of developing museum policy I am alarmed. The RCAF has transferred recently to the Canadian War Museum a Sopwith Camel and has offered and is preparing to deliver an Me 163B, a Fairy Battle, a Mosquito, a Kitty Hawk, a Lysander and a Mustang.… [I]f the RCAF does develop a central airforce museum, its central exhibit should be a display of its Second World War equipment. This will not be possible if prize items like the above have been alienated.… If we are to have an airforce museum, I do not think Second World War aircraft should be given to the National Museums.[81]

As argued above, the pooling of resources at Rockcliffe was originally intended as an intermediate step towards the ultimate establishment of a national RCAF museum. As the reality of integration and unification became apparent, Manning and the Air Force chose to perpetuate the existence of the NAC by transferring its management briefly to the CWM and shortly thereafter to the NMST. After unification, groups like the RCAF Memorial Fund and the RCAF Association (now the Air Force Association of Canada) continued to call for the creation of a museum to commemorate Canada's Air Force, its culture and its heritage. The pool of aircraft in Rockcliffe remained the most appropriate nucleus for such a museum; however, rebranding it as such was all but impossible after it became part of the National Museums of Canada Corporation in 1968.

These Air Force advocacy groups were torn between two primary objectives. They acknowledged the value of the Rockcliffe collection and joined the call for a new building to house the NAM. Fire remains one of the greatest threats to historic aircraft collections, and the three wooden hangars at Rockcliffe were particularly susceptible to this risk. When federal funding was finally secured for the construction of a modern facility to house the NAM, the RCAF Memorial Fund contributed funds to include the construction of an RCAF Hall of Tribute. At the same time, these RCAF veterans still longed for a national Air Force museum.[82] Air Force officers established the RCAF Memorial Fund in 1967 for the purpose of building a memorial to their former branch of the service. This fund fulfilled its original mandate in 1984 by establishing the RCAF Memorial Museum, very appropriately, on 6 RD Road in Trenton (since renamed RCAF Road).[83] This museum has become the repository for retired squadron colours, home to numerous Air Force memorials, and acquired rare, historically significant aircraft such as a Handley Page Halifax Mk VII. The museum's bomber is the only authentically restored example of this aircraft on display in the world and serves as a suitable memorial to the many Canadians who fought and died in Halifax and Lancasters as part of No. 6 Bomber Group during the Second World War. Yet the fact remains that the CAvM, by far, holds the most appropriate collection of aircraft to tell the story of Canada's Air Force from its earliest days until the present. This is not surprising considering W/C Manning and the RCAF consolidated it specifically for that purpose. Yet, much like the history of Fokker D.VII 6810 and its restoration, the Air Force origins of the CAvM have faded from memory.

A published history of the aircraft collection in Rockcliffe first appeared in 1988 and was authored by Ken Molson. In this quasi-memoir, Molson suggests that the modern institution of the Canada Aviation Museum was a natural outgrowth of the early National Aviation Museum, formed under his leadership at Uplands in 1960.[84] He acknowledges Manning's role in securing hangar space at Rockcliffe and bringing the RCAF's Second World War aircraft to the station, but makes no mention of the RCAF Museum project. It matters little whether Molson was actually unaware of the RCAF's intentions, or simply chose not to discuss them in this text. Either way, the fact remains that W/C Ralph Manning shepherded projects of commemoration on behalf of the Air Force. Official sanction for the RCAF Museum Program dissolved in the wake of unification in 1967, but the desire to preserve air force traditions remained strong amongst lobby groups. Despite the existence of such groups, over time the memory of Manning's efforts and even some of the RCAF's traditions have faded. Yet the tangible impact of Ralph Manning's leadership in preservation can be seen to this day.

The contemporary CAvM in Rockcliffe has since grown beyond Manning's original goal of an Air Force museum to encompass the whole breadth of Canadian aviation history. Even so, the military portions of the collection remain a powerful and historically valuable tribute to military aviation in Canada, before, during, and after the period of the RCAF's existence from 1924-1968. The CAvM's blend of historic civilian and military aircraft, preserved on a site with considerable air force history, is a testament to the efforts of Ralph Manning and the RCAF Historical Section. Despite his best efforts, the mixed fate of Borden's Hangars serves as a reminder that leadership in preservation is still needed

today. The third of Ralph Manning's major projects of commemoration, Fokker D.VII (Alb.) 6810/18 of the Brome County Historical Society, illustrates both the success Manning was able to achieve, and the requirement for ongoing projects of preservation. When 6 RD conserved the Knowlton Fokker in 1963, it performed the first maintenance on the machine in 45 years. Today, after a subsequent 45 years on display, the aircraft is once again showing its age and the ravages of time. This detailed retrospective of W/C Ralph Manning's time at the RCAF Historical Section has illustrated his ability to influence those around him, even as his specific objectives evolved in response to a changing situation. The RCAFM origins of the CAvM and the source of Knowton's 6810/18 illustrate the transitory nature of memory, both institutionally and at an individual level. Such impermanence of commemoration underlines the ongoing need for leaders who will follow the example set by Ralph Manning and strive for the preservation of Air Force heritage, culture and history.

Notes

1. Directorate of History and Heritage (hereafter DHH), 74/560 (Air Historian's Policy), Memorandum, June 6, 1961, Historical Information – Museums, R.V. Manning.

2. DHH, 74/560, Museums: Display of RCAF Equipment, E.B. Armstrong, January 17, 1962.

3. Desmond Morton, *A Military History of Canada*, (Toronto: McClelland and Stewart, 1999), 251.

4. Brereton Greenhous and Hugh A. Halliday, *Canada's Air Forces: 1914-1999*, (Montreal: Art Global/ DND, 1999), 138.

5. Tim Cook, *Clio's Warriors*, (Toronto: UBC Press, 2006), 143.

6. In contrast, the Canadian Navy has provided considerable funding to DHH, which has recently produced two volumes of the Official Operational History of the RCN in the Second World War.

7. DHH, 74/560, Memorandum, 6 June 1961, Historical Information – Museums, R.V. Manning.

8. In October 2004, the United States Air Force Museum (USAFM) was renamed the National Museum of the United States Air Force (NMUSAF).

9. Brome County Historical Society (hereafter BCHS) Archive, Fokker D.VII 6810/18 File, Crosoy to Shufelt, June 25, 1963.

10. DHH, 74/650, Recent Developments in RCAF Museum Policy, January 29, 1962.

11. Cook, 113.

12. Ibid., Chapters 3, 4 and 5.

13. Ralph Baker, *The Ship Busters – The Story of the RAF Torpedo-Bombers*, (London: Chatto & Windus, 1957), 248.

14. Kenneth B. Conn, "The Royal Canadian Air Force Historical Section," *Canadian Historical Review,* 27 (1945): 249.

15. *The RCAF Overseas: The First Four Years,* (Toronto: Oxford University Press, 1944), and *The RCAF Overseas: The Fifth Year* (Toronto: Oxford University Press, 1945).

16. Cook, 139.

17. DHH, 78/543, The Air Historian, 1940-1965.

18. C.P. Stacey, "The Life and Hard Times of an Official Historian," *Canadian Historical Review*, 51 (1970): 29-30.

19. F.H. Hitchins, *Air Board, Canadian Air Force and Royal Canadian Air Force*, National Museum of Man: Mercury Series, Canadian War Museum Paper (hereafter CWM) No. 2. (Ottawa: National Museums of Canada, 1972).

20. *Transactions of the Brome County Historical Society*, (Volume III): From August, 1910 to November 1926, August 26, 1921, 31.

21. University of Western Ontario (hereafter UWO) Archive, Beatrice Hitchins Memorial Aviation Collection (hereafter BHMAC), B1797, III-22, Feast, A.M. (First World War) Letter from Feast to Hitchins, March 23, 1953.

22. BCHS Archive, Fokker D.VII 6810/18 File, Audio Recording, A.M. Feast on Museum's D.VII, August 19, 1978. Transcript by Ralph Mason.

23. A.M. Feast, "Achtung-DVII!" *The Roundel*, 5.10 (November 1953), 32.

24. *Transactions of the Brome County Historical Society* (Volume III): From August, 1910 to November 1926, Twenty-Second Annual Meeting, 30 August 1939, 27.

25. UWO Archive, BHMAC, B1797, III-22, Feast, A.M.(First World War) Letter from Feast to Hitchins, March 31,1953.

26. UWO Archive, BHMAC, B1797, III-22, Feast, A.M.(First World War) Letter from Hitchins to Feast, May 7, 1953.

27. Library and Archives Canada (hereafter LAC), Records of the Department of Militia and Defence (hereafter RG9) III B 1, Vol. 3433, T-5-49 (Trophies War Shipment to Canada). Detailed Account of Shipment per C.P.O.S. *Batsford*.

28. E.P. Soye, "The Dominion Packing Service: The Canadian Air Force, the Imperial Gift and War Trophy Aircraft in 1919," *Cross and Cockade International Journal* 39 no.3 (2008): 181–88.

29. LAC, Records of the Public Archives Department (hereafter RG37), D 374, K. Letter from Foster to Doughty, November 27, 1918.

30. W. Stewart Wallace, *The Memoirs of The Rt. Hon. Sir George Foster*, (Toronto: MacMillan, 1933), 204-07.

31. LAC, RG37, D 374, K. Letter from Foster to Doughty, June 2, 1920.

32. UWO Archive, BHMAC, B1797, III-32, Manning, R. (and R. Dodds), letter from Manning to Hitchins, March 13, 1962.

33. DHH, 74/560, 895 – AH, Memorandum, Secretary–Defence Council, February 18, 1963.

34. DHH, 74/560, letter from Robertson to Armstrong, Display of RCAF Equipment, January 29, 1962.

35. BCHS Archive, Fokker D.VII 6810/18 File, letter from Murray to Shufelt, April 27, 1962.

36. BCHS Archive, Fokker D.VII 6810/18 File, letter from Shufelt to Murray, May 12, 1962.

37. UWO Archive, BHMAC, B1797, III-22, Feast, A.M. (First World War), letter from Feast to Hitchins, March 31, 1953.

38. H. Hugh Wynne, *The Motion Picture Stunt Pilots and Hollywood's Classic Aviation Movies*, (Missoula: Pictorial Histories, 1987), 72.

39. It is worthy of note one of these five aircraft was subsequently purchased by the National Aviation Museum and imported to Canada in 1971. Fokker D.VII 10347/18 has since been partially restored, but has been considerably modified in its post-war career, particularly when compared to the unrestored condition of Knowlton's Fokker D.VII (Alb.) 6810/18.

40. BCHS Archive, Fokker D.VII 6810/18 File, letter from Shufelt to Murray, May 12, 1962.

41. BCHS Archive, Fokker D.VII 6810/18 File, letter from Manning to Shufelt, June 28, 1962.

42. Jonathan F. Vance, *High Flight: Aviation and the Canadian Imagination*, (Toronto: Penguin, 2002), 56-57.

43. BCHS Archive, Fokker D.VII 6810/18 File, letter from Manning to Shufelt, September 28, 1962.

44. BCHS Archive, Fokker D.VII 6810/18 File, letter from Shufelt to Manning, October 11, 1962.

45. BCHS Archive, Fokker D.VII 6810/18 File, letter from Manning to Shufelt, December 18, 1962.

46. BCHS Archive, Fokker D.VII 6810/18 File, letter from Manning to Shufelt, February 8, 1963.

47. Kenneth M. Molson, *Canada's National Aviation Museum: Its History and Collection*, 2nd ed. (Ottawa: NAM, 1988), 180, 191, and 198.

48. Canada Aviation Museum (hereafter CAvM), Fokker D.VII 10347/18 (German Airforce), Technical File, Volume 2, 710077. Suggestions of Mr. Ruggles regarding Treatment of Fokker D.VII Fabric.

49. BCHS Archive, Fokker D.VII 6810/18 File, Agreement regarding loan of Fokker D.VII (Alb) 6810/18, signed March 28, 1963.

50. Arnold M. Feast, "Achtung–One More Time: Or how to love thine enemy [artefact] as thyself," *Township Sun* (Lennoxville), March 1977, 22.

51. CAvM, Fokker D.VII 10347/18 (German Airforce), Technical File, 2, 710077, letter from Manning to CO 6 RD, April 30, 1963.

52. UWO Archive, BHMAC, B1797, III-32, Manning, R. (and R. Dodds), letter from Manning to Hitchins, November 20, 1962.

53. BCHS Archive, Fokker D.VII 6810/18 File, letter from Shufelt to Manning, June 15, 1963.

54. CAvM, A.E.G. G.IV 574/18, Technical File, Volume 1, 670631, letter from Manning to Murphy, January 27, 1967.

55. DHH, 74/560, Recent Developments in RCAF Museum Policy, R.V. Manning, January 29, 1962.

56. In 1958 the National Museum of Canada included the Canadian War Museum and reported to the Department of Northern Affairs and National Resources. Responsibility for the National Museum of Canada was transferred to the recently created Department of the Secretary of State for Canada in1964. In 1966, a year after the RCAF Historical Section ceased to exist and could therefore no longer guide the collection's future, the recently consolidated National Aeronautical Collection was incorporated into the nascent (or more accurately, non-existent) Science and Technology Museum as a new branch of the National Museums of Canada. The 1968 National Museums Act created a new National Museums of Canada Corporation that encompassed the National Gallery, National Museum of Man (the old Human History Branch of the NMC, which included the CWM), National Museum of Natural Sciences (formerly the Natural History Branch of the NMC) and the National Museum of Science and Technology (which still included the NAC). Also noteworthy during this period is the transfer of the Canadian War Museum from the old War Trophies Shed on Sussex Drive into the adjacent building formerly occupied by the Public Archives Department in 1967. The CWM had occupied the War Trophies shed since before its official establishment in 1942. The "shed" was so named because it had been used to house trophies collected by the Public Archives Department since shortly after the Great War.

57. DHH, 74/560, 10-11-C15 (AOC) April 18, 1962. Ref Your 045-6 (AMP) March 13.

58. S.F. Wise, *Canadian Airmen and the First World War*, (Toronto: University of Toronto Press, 1980), 115.

59. DHH, 74/560, Recent Developments in RCAF Museum Policy, Training Command Museum, August 24, 1964, Acting AOC TC.

60. Ibid.

61. DHH, 74/560, 045-6 TD 4343P, Establishments and Funds for the Rockcliffe and Camp Borden Museums, December 17, 1964, R.V. Manning.

62. E.T. Karkut, ed., *The History of 6RD and the Aerospace Maintenance Development Unit*, (Erin: Boston Mills Press, 1990), 70.

63. Norm Marion, *Borden's Hangars: Still Standing… but for how long?*, October 30, 2003, available online at http://www.airforce.forces.gc.ca/16wing/news/releases_e.asp?cat=71&id=397 (accessed September 15, 2009).

64. Norm Marion, ed., *Camp Borden: Birthplace of the RCAF*, (Borden: Kromar, 1999), 6-39.

65. DHH, 74/560, Memorandum, June 6, 1961, Historical Information – Museums, R.V. Manning.

66. Molson, 36-38.

67. DHH, 75/505 (RCAF Museum Policy), Summertime Display of Historic Aircraft, November 8, 1962, R.V. Manning.

68. DHH 74/437 (Museums – National Aeronautical Collection), letter from Glover to Diamond, April 15, 1964.

69. DHH 74/437, letter from Murray to Glover, May 19, 1964.

70. Sharon Babaian, CSTM Origins, Canada Science and Technology Museum, available online at http://www.sciencetech.technomuses.ca/english/about/pdf_reports/OriginsBro_E.pdf (accessed September 15, 2009).

71. Paul Hellyer, *Damn the Torpedoes: My Fight to Unify Canada's Armed Forces*, (Toronto: McClelland and Stewart, 1990), 88.

72. C.P. Stacey, *A Date with History: Memoirs of a Canadian Historian*, (Ottawa: Deneau, 1983), 255-60.

73. Cook, 212.

74. Stacey, 256.

75. DHH, 74/560, Memorandum in reference to 045-5 TD 4343P(Sec DS), January 13, 1965.

76. Desmond Morton, *A Military History of Canada*, (Toronto: McClelland and Stewart, 1999), 253.

77. Hellyer, 172.

78. Stacey, 257.

79. Marc Milner, *Canada's Navy: The First Century*, (Toronto: University of Toronto Press, 1999), 254.

80. DHH, 74/560, 300-1, Adoption of Canadian Army Office Rank Titles, February 1, 1965.

81. DHH, 74/560, Memorandum, June 6, 1961, Historical Information – Museums, R.V. Manning.

82. Molson, 83-84.

83. The Royal Canadian Air Force Memorial Museum was renamed the National Air Force Museum of Canada in 2007, shortly after the USAFM in Dayton became the NMUSAF.

84. Molson, 24.

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Chapter 9

Canada and Space: An Issue of Leadership

William P. Sparling

If one were to believe the mainstream media and popular fiction, then there would be only two players in space: the United States (US) and Russia. Lately, of course, there has been a smattering of other participation; in addition to French and Japanese satellites, China has successfully launched its first astronaut (Yang Liwei) into orbit, and Sir Richard Branson and Burt Rutan have formed a private space venture targeting tourism following the successful 2004 launches of SpaceShipOne. Despite the difference in scale, these events illustrate that space is well within the grasp of "middle powers" such as Canada. The most difficult part of space research, proving that access to space is possible, has already been done and Canadians had a hand in it from the beginning. Now, with potentially astronomical benefits achievable, the Canadian people and government seem schizophrenic on the topic. While space industries are valuable contributors to knowledge and the economy, not to mention an aid to government functions, the government has been forced to pander to various vocal lobbies regarding national space policy. The traditional public silence of the Canadian Forces (CF) has served no one in this respect, as important insights on this topic are thereby lost in the general uproar of debate (when debate is even possible, given the inherent politics). This is regrettable, as the CF in general, the Air Force in particular, can make a meaningful contribution to Canada through space related activities, but only if there is sufficient political and military leadership to make it so.

Whenever the topics of space and military involvement are raised, many members of the general public and political establishment hold common misperceptions, thanks to political lobbies and popular movie and television programs (Star Wars, Star Trek, Battlestar Galactica, etc.). They often envision vast space battles and planetary bombardments reminiscent of the tales from 18th century naval battles. Even those who manage to see past the veil of fiction are subject to the prejudices induced by this imagery and largely fail to draw the distinction between the militarization of space and its weaponization. Far from leaving a "Death Star" in orbit to threaten the planet, the employment of military assets, other than direct weapons, does not threaten the Earth.

Militarization of space is different from weaponization, in that the assets employed are not themselves weapons. These assets can range from simple communication and navigational aids to reconnaissance satellites (remote sensing) of great resolution. Although these assets can be of immense value in military operations, they are not a direct threat, in and of themselves, to a potential adversary. The Honourable Colin Kenny, chair of the Standing Senate Committee on National Security and Defence, points out that regardless of the best wishes of the Canadian public, space is already militarized. He further states, in discussing the use of space for military purposes in support of the national interest, "What is really unthinkable is waiting so long that potential adversaries are allowed to gain an advantage in space that might be insurmountable."[1] Recognition of the utility of space-based assets to the national interest is not the same as advocating the emplacement of orbital weaponry.

Weaponization, however, does pose a direct threat that limits defensive potentials. For that reason, a number of treaties have addressed this. The most commonly cited treaties governing military activities (weaponization) are the Outer Space Treaty (OST), which forbids the use of weapons of mass destruction (WMD) in space, but not conventional weapons, and the Anti-Ballistic Missile (ABM) Treaty. Threats of this nature are extremely difficult to counter and have themselves given rise to programs such as the American Strategic Defense Initiative (nicknamed Star Wars) and Theatre Ballistic Missile Defense. Threats from weaponization include, but are not limited to, orbital bombardment systems using WMD and kinetic strike weapons, orbital nuclear burst systems utilizing nuclear-magnetic pulse / electro-magnetic pulse (NMP/EMP), and antisatellite (ASAT) systems.[2] Even if space-based weapons are not used against planetary targets, the damage to valuable orbital assets can potentially have worldwide consequences of unprecedented magnitude. According to Michael Listner:

> the utilization of space has increased dramatically since the Cold War [*sic*] to the extent that everyday activities from telecommunications to financial markets to civilian navigation rely heavily on space infrastructure. Protecting these space assets is important given that their destruction would not only affect the military but could also effectively cripple economies.[3]

Against an International Backdrop

The space programs of the US and the former Soviet Union initially took the form of an 18-year "space race" (1957-75), following the launch of Sputnik 1 (04 October 1957). Each used space exploration as a vehicle for national prestige, as well as military advantage. Since space exploration was primarily supported by military assets and funding, and as the military advantages were deemed to trump other goals, the original cosmonauts/astronauts were military personnel, primarily test pilots. In fact, the first person to fly in space was Soviet pilot (then Senior Lieutenant) Yuri Gagarin (12 April 1961) aboard Vostok 3KA-2 (renamed Vostok 1). The continued development of satellites, by each country, as well as the manned orbital laboratories (MOL, Skylab, Mir) had both civilian/scientific applications and military. Although the satellites and laboratories were overtly armed, it was the potential employment of orbital WMD that led to the negotiation of the OST, in an effort to remove this threat to the balance of power / détente.[4] A by-product of the OST was to drive space weapons research "underground" so that each could claim adherence to the treaty so long as there were no system deployments. The ABM treaty followed, as a means of maintaining détente by reinforcing the mutual assured destruction (MAD) doctrine, limiting the ability of each to defend against ballistic missiles.

The lunar excursions of the US, with the first manned landing of 20 July 1969, effectively ended the space race, at least for prestige purposes. Military developments included improved secure communications, high-resolution photoreconnaissance, and the American Global Positioning System (GPS) constellation satellites. As well, the US under President Ronald Regan (1983) introduced the Strategic Defense Initiative (SDI) as a means of countering the Soviet numerical strength in nuclear ballistic missiles, a potentially destabilizing move. Despite the earlier potential of SDI to destabilize détente, it was after the collapse of the Soviet Union that President G.W. Bush, in 2001, formally withdrew the US from the ABM treaty, leaving doubt as to the status of the OST.

The US remains one of only two nations to test or operationally deploy an ASAT weapon. On 20 February 2008, the US fired an SM-3 missile that destroyed an errant American spy satellite (USA-193) at an altitude of 247 kilometres. Ostensibly, this launch was to protect persons on the ground from exposure to the satellite's highly toxic hydrazine propellant, rather than any "assertion of US space warfighting doctrine."[5] However, it has been widely interpreted as a demonstration of American capabilities in response to a recent Chinese ASAT test/demonstration. This successful missile firing was also the first guided missile to be fired by a naval ship against an orbital target. Tellingly, this "test" is fully in line with official American aerospace policy: "Controlling the high ground of space is not limited simply to protection of our own capabilities. It will also require us to think about denying the high ground to our adversaries."[6] This indicates that the US has officially committed to pursuing a course leading to space superiority, which will give the US significant military and economic advantages in space. This will also lead to discord, as other states seek parity or advantage for themselves. According to United States Air Force Colonel Charles D. Lutes, although the original space race was for prestige, "the next will be about wealth creation from space, 'a boom in the economic value of space itself.'"[7] As the economic consequences of failure in this area are dependent on foreign industry and goodwill, nations that embrace these technologies will also be better prepared to maintain their own economic and physical sovereignty. Unfortunately, given the American predilection for unilateralism, "in a world based on the principle that nations are sovereign entities, an American decision to develop and deploy a unilateral space-control capability would raise troubling questions regarding the meaning of sovereignty."[8]

On the civilian side, National Aeronautics and Space Administration (NASA) has moved on following the lunar (Apollo) programs. Access to space has, until recently, been firmly in the hands of governmental agencies and select defence contractors. Although third-party launches of orbital assets are possible, using approved vehicles, all domestic launches remain subject to the approval of the US government. The pioneering flight of SpaceShipOne for the Xprize was a rare exception; otherwise, the US has maintained a tight control over domestic access to space, especially since the terrorist attacks of 2001.[9] Additionally, the US has taken steps to assert control over civilian space assets in the name of national security, including economic interest, especially since the problematic military adventures in Iraq and Afghanistan began. Shutter control, as exercised under US security laws, allows the US to control the flow of information from commercial sources, gained or transferred by space-based resources under US legal control. Under US law, the US government regulates all activities of an American company or legal entity. This includes subsidiaries based outside the US and any company that has an office in US territory. The Patriot Act goes even further, allowing the US government to seize or appropriate proprietary knowledge in the name of national security and not even inform the owners that it has done so. "The problems posed by [access to] high-resolution commercial

remote sensing have resulted in a complex debate between national security and economic interests in the United States and abroad."[10] This troubling aspect was one of the primary reasons that the Canadian government blocked the sale of the Space Division of MacDonald, Dettwiler and Associates (MDA) to a US corporation as it was "not in the national interest."

The multi-role space shuttle has given the US a reusable capability to emplace and service orbital assets. Despite human losses in the continued use of the space shuttle, it remains the premier US vehicle and will continue in service for the foreseeable future. Internationally, NASA continues to drive a large proportion of space science and exploration, as well as being the lead agency in the International Space Station (ISS), providing science benefits in addition to continuing to demonstrate industrial capabilities. The growing obsolescence of the space shuttle and its launching system, however, begins to indicate an institutional loss of initiative and momentum at NASA, which the United States Air Force (USAF) is poised to overtake as it transitions into a space superiority role. Furthermore, commercial ventures, discussed below, foreshadow a change in NASA's fortunes.

Having inherited the former Soviet Union's space program, Russia has been unable to match American efforts. The Russian Federal Space Agency (*Federal'noe kosmicheskoe agentstvo Rossii*, or RKA) was formed after the dissolution of the Soviet Union and its space program. Using the equipment and launch sites of the former Soviet program, in cooperation with the government of Kazakhstan, the RKA has centralized control of Russia's civilian space program, including all non-military space operations. Despite constant funding problems, the RKA has carved a niche for itself as a launching centre for third-party payloads and (expensive) space tourism, with the ISS as the destination, as a means of paying the bills.

Russia is one of the partners in the ISS, having provided two core space modules, later mated to NASA's Unity Module. The RKA is also responsible for expedition crew launches and resupplies the space station via the Progress cargo rocket spacecraft. Predictions by the RKA are that flights to the ISS will approximately double in 2008. Additionally, RKA has committed to supplying two additional modules to the ISS: a Multipurpose Laboratory Module and the Docking Cargo Module (to replace the Russian Research Module).

The Military Space Forces (VKS) is the branch of the Armed Forces of the Russian Federation responsible for military space operations. Established on 10 August 1992, the VKS replaced the former Soviet Union's Ministry of Defence Space Units. The main tasks of the VKS are detection and defence against ballistic missiles, and the creation, deployment, maintenance and control of orbital space vehicles, including the GLONASS global positioning system. Although Russia has been working on a reusable space plane/shuttle of its own, progress on the Kliper has ceased and it is uncertain whether the program will resume. Funding for both the RKA and YKS is limited and irregular as Russia continues to face political and economic difficulties.

China's efforts in space show a highly developed understanding of the potential application of space power beyond military might. The relatively recent expansion and high-tech industrial development of the Chinese economic base has been instrumental in making possible their rapidly growing space program. Using their ambitious program to enhance their national prestige, China has translated this into an economic engine capable of contributing to the overall economy through industrial growth and third party launch services. As well, "plans for lunar exploration show that they have a sophisticated understanding of the way that such missions will add to both their hard and soft national power."[11] Even more troubling than the Chinese use of space as an economic booster is their apparent desire to challenge other powers in space. Having already proven their own anti-satellite system in an operational demonstration (January 2007), China has promulgated political direction to its forces that indicates "an obsessive pursuit of ways to counter US high-tech military power, including US assets in space."[12] Their political direction and indoctrination on this subject is clear:

> In a PLA [People's Liberation Army] National Defense University book, Joint Space War Campaigns (2005), author Colonel Yuan Zelu writes: "[The] goal of a space shock and awe strike is [to] deter the enemy, not to provoke the enemy into combat. For this reason, the objectives selected for strike must be few and precise … [for example] on important information sources, command and control centers, communications hubs, and other objectives. This will shake the structure of the opponent's operational system of organisation and will create huge psychological impact on the opponent's policymakers."[13]

This would indicate that the Chinese government is following a plan to use space assets to maximum effect, while eroding those of potential adversaries, in all areas of national interest.

In the past, official Canadian space efforts included such milestones as the Black Brant rocket, ionospheric rocket studies, the Alouette and Anik satellites, the robotic arm for the US Space Shuttle and, lately, the International Space Station's Special Purpose Dexterous Manipulator, known as "Dextre." As well, RADARSAT 1 and 2 have proven to be valuable resources, with such resolution that the technology is the envy of other states. The Honourable Jim Prentice, Minister of Industry, describes RADARSAT as a "satellite system capable of timely delivery of large amounts of data over a vast geographic region."[14] Surprising to some, there has been Canadian involvement in space efforts virtually from the beginning. Canadian science and engineering supported American programs through the cold war, including satellite development and NASA's manned space flight programs, while pursuing more modest domestic programs. In contrast with American programs, the majority of Canadian efforts were not overtly military in character; no attempts to develop space weapons were made, and only two Canadian astronauts were seconded to the Canadian Space Agency (CSA) Marc Garneau and Chris Hadfield from the Navy and Air Force respectively. It is in the 21st century that we find a greater emphasis on Canadian involvement in space, not solely for prestige or minor/isolated economic benefits, but also as a function of sovereignty.

Canadian Aerospace Power: A Brief Look at the Historical and Present Context

The origins of Canadian aerospace power began in the Great War, where such notables as William Avery "Billy" Bishop, V.C. and Raymond Collishaw laid, by example, the foundations for the air force to follow. During the interwar period, the Royal Canadian Air Force (RCAF) was officially created, appropriately enough on 1 April 1924, adopting the telling motto *Per Ardua Ad Astra* (Through Adversity to the Stars) found on the original "albatross" cap badge. Working on important—though modest and largely unknown—projects until the Second World War, the RCAF aerial mapped large tracts of Canadian territory and advanced aeronautical knowledge. Contributions during the Second World War included research, logistic support, and active operations with such prominent figures as Andrew Mynarski, V.C., George "Buzz" Beurling, and Leonard Joseph Birchall. The post-war years for the RCAF involved more research, as well as cold war operations, with space experimentation receiving significant defence funding. The RCAF was the primary lodger unit of Fort Churchill, Manitoba, providing support to its rocket facility. Unfortunately, following the withdrawal of the US component of the Fort Churchill range and the transfer of all space research to the National Research Council of Canada (NRC), the RCAF was virtually severed from meaningful contact with space research by political fiat.

Canada's early involvement with space began during the Second World War with investigation of the ionosphere to improve naval communications. Post-war work involved satellite programs, following the successful Soviet orbiting of Sputnik I, to continue investigation of the ionosphere. The end result was the Alouette series of satellites. Designed to study the ionosphere from above, the Alouettes, and the later International Satellites for Ionospheric Studies (ISIS), were completely designed and built in Canada, although launched on US rockets. Pioneering space researcher Doris Jelly recorded:

> Canada's major entries into space during the first decade were through scientific programs.… When Alouette I was launched in September, 1962, Canada became the third nation to have built its own satellite for orbit.… So in 1967, the year of Canada's centennial, the emphasis of Canada's space program was refocused on satellite applications. Communications was accorded top priority.… In the [1967] Chapman report, space technology was seen to be "so directly related to the needs of a large, sparsely populated country" that, as a consequence, "*the elements of space technology vital to Canada must be under Canadian control.*" (Italics added by author) [15]

As a consequence, the Anik series of domestic communications satellites, the world's first, were created, allowing the transmission of television and telephone signals to anywhere in Canada.

Canadian innovation in the space sciences was not limited to satellites or wartime ionospheric research. In the 1950s, the Black Brant sounding rocket was designed by Albert Fia and launched from Fort Churchill, Canada's premier rocket facility, in 1959. Still in use, the Black Brant series is used for research, giving scientists a remarkable platform to deploy instruments at altitudes of 35 to 300 kilometres. Originally opened in 1954, the Fort Churchill facility remained active as a mixed scientific and military launch site until 1960, when the US withdrew and a fire destroyed many of the facilities; in 1965 the National Research Council of Canada took complete control of the base. During its heyday, Fort Churchill launched more than 3,500 suborbital flights, each of which expanded scientific knowledge of near and outer space.[16]

The main threat during the cold war confrontation between the superpowers was considered to be the potential use of nuclear weapons. The end of the cold war, with the collapse of the former Soviet Union, has not—despite comments to the contrary—removed the nuclear threat. Although the number of nuclear weapons systems has declined from over 34,000 to about 31,500, there remains an implicit threat from the remainder. And it must be noted that not all nuclear weapons are under the control of the official members of "the nuclear club." As bizarre as it might seem, this new expression of MAD, with all its major and minor players, is only an extension of the previous status quo. Harking back to the classic Stanley Kubrick movie Dr. Strangelove, some statements are equally applicable to the contemporary situation. Sovereignty can be expressed as a corollary of "the eccentric strategist Dr. Strangelove [who] defines deterrence [as a part of sovereignty] when he says: 'Deterrence is that art of producing in the mind of the enemy … the fear to attack.'"[17] The ability to detect as well as respond to acts of aggression is therefore a fundamental part of deterrence and sovereignty.

Canadian government policy is that Canada will adhere to the OST in its entirety. This means that weaponization is completely out of the question. Militarization, however, is another matter. In the past, Canada has had little use for space-based assets in support of military activities, unlike our southern neighbours. While satellite communications have proven highly effective, particularly as demonstrated in the 1991 Gulf conflict, the CF has relied on commercial service providers and allies (the US). As well, satellite photoreconnaissance has proven to have great benefits for military operations and intelligence gathering. Unfortunately, these assets are also available to potentially hostile agents, making their existence a potential threat to operations in addition to general security. Commercial providers such as Google Earth (non-real-time) and DigitalGlobe (real-time) are able and willing to provide imagery for a fee to any buyer; however, they are also subject to a degree of domestic shutter control (especially in the US). As mentioned above, Senator Colin Kenny believes that it behoves Canada to take steps to bring national capabilities into line with those of other major states. CF involvement, as enunciated in the 1998 Department of National Defence Space Policy document, consists primarily of aerospace warning and control, under NORAD, as well as taskings to monitor space activities, provide support to CF operations, support arms control, and participation in space supported search and rescue activities. This places Canadian policy in line with that of the US, excepting space control and ballistic missile defence, the major difference being an emphasis on information (Canada) versus building offensive national capabilities (US). In order to meet this mandate, however, the CF has no organic space-based resources and is dependent on allies (primarily the US) and commercial service providers, including MDA.

> Canada has always had strategic interests in space; however the advancement of those interests has been sporadic at best. Canadian foreign policy and security policy decisions in the 1960s had a definite impact on the development of any national space assets, especially those that could have served a military purpose. The largest detriment was the misperception that a potential militarization of space automatically included a weaponization of space. Putting weapons in orbit was and still is anathema to Canadian societal values.[18]

On the civilian side, Canadian space policy is applied through the Canadian Space Agency (CSA). Its objective is to "develop and apply space science and technology to meet Canadian needs and to foster an internationally competitive space industry."[19] Although in the mid 1960s the funding for space-related projects was approximately 41 per cent from the Department of National Defence (DND), the change in emphasis to commercial applications and an overly strict interpretation of the OST and other treaties resulted in changes to the funding model, where DND no longer had much of a role in space programs. It is only in comparatively recent years that space has regained an emphasis in DND, as the potential impact of space-based systems on Canadian interests has been recognized. Furthermore, it must be recognized that in the post-Vietnam war years, especially under the Trudeau regime, military prestige had fallen on hard times and public involvement in such projects was avoided to prevent misperceptions of national intent, largely as a result of the vocal anti-military lobbies active in national and international politics. In keeping with both policy and prejudice, all space efforts were therefore routed through the CSA, which pursues what it perceives as Canadian interests within an extremely narrow viewpoint, non-military in nature and with strictly limited input from outside sources or public participation. In particular, astronaut recruitment is limited to pilots, medical doctors and engineers. This severely limits the potential pool of available talent, ignoring persons in other fields that could perform valuable services in space endeavours, effectively crippling space efforts before they have properly begun.

Regarding national sovereignty, however, it has long been recognized that Canada has "a long, porous coastline and maritime approaches that are difficult to monitor continuously and effectively." This has made the use of maritime patrol aircraft (MPA) to augment naval assets, as well as remote sensing systems, of critical importance in a changing world.[20] Of course, most commentators are offended, for various reasons, by whichever choice the government might make, some seeing any action as an affront to their politics, others to their pocketbooks. However, with changes to the environment, global economic shifts, and the need to exercise sovereignty, Rob Huebert comments, "Doing nothing will soon be a luxury that Canada can no longer afford."[21] Furthermore, he states, RADARSAT-2 "will allow for a vast improvement in Arctic Surveillance" making it far more than a luxury.[22] According to the Canadian Space Agency, RADARSAT "provides useful information to both commercial and scientific users in such fields as disaster management, interferometry, agriculture, cartography, hydrology, forestry, oceanography, ice studies and coastal monitoring." Of course, it also has applications for law enforcement and the military.[23] As a cost-effective means of meeting national obligations to monitor sovereign territory, "RADARSAT-2 represents the application of Canadian publicly funded state of the art science and technology for accomplishing these tasks."[24] This, of course, could be viewed askance by other parties. Scott Boregeson, unhappy with Canadian decisions to deploy RADARSAT-2, without American guidance, recorded:

> Decisions made by Arctic powers in the coming years will therefore profoundly shape the future for decades. Without U.S. leadership to help develop diplomatic solutions [implying a decision to destabilize the region] Canada has just launched a satellite surveillance system designed to search for ships trespassing in its waters.[25]

Unfortunately, as seems usual, "what the US sees as 'leadership' is often seen [elsewhere] as 'unilateralism'" in pursuit of their own objectives.[26]

On matters of sovereignty, opinions vary according to political viewpoint. Prime Minister Stephen Harper referred to Canada's Arctic sovereignty as a "use it or lose it" proposition. This is equally applicable to all aspects of sovereignty, anywhere in Canadian territory, highlighting "the need to coordinate our Arctic, defence, environmental, foreign, space, and technology policies with a whole of government approach."[27] Although there is no direct military threat to Canadian sovereignty, that is not the same as recognition and respect for Canadian sovereignty and interests. Canada and Denmark are presently disputing the status (ownership) of Hans Island in the periphery of the Canadian arctic. As well, Canada is involved in territorial disputes with the US and Russia, although the disputes remain amicable at this time. It remains, however, that:

> Canada's arctic sovereignty is one of the few areas of fundamental difference between the Canadian and US governments. The US government has always insisted that American military and commercial shipping enjoys the right to move through the Northwest Passage between islands in the Canadian arctic.[28]

In the past, the US Navy has been able to operate—in particular submarines—with relative impunity in Canadian waters. However, the ability to effectively monitor territory and identify/locate interlopers would be a positive assertion of sovereignty. As such, Jane's International Defense Review correctly describes RADARSAT as "the principal space sensor" for maritime surveillance applications with both military and civilian implications.[29] This becomes particularly important given the recent emphasis placed on the Arctic by the US as it seeks to gain control over a greater share of the potential Arctic resources. This is a "planned shift in American foreign policy … to 'sovereignty' and 'security presence' in Alaskan waters" bordering Canadian territory, where the US is advancing a claim against Canadian territory in the Beaufort Sea.[30]

A Vision for the Future

The need to conduct surveillance over the expanse of Canadian territory has been obvious to planners for many years. Prior to the advent of space-based resources, surveillance and sovereignty was exercised with occasional Air Force overflights and RCMP dog team patrols in conjunction with the Canadian Rangers. With space-based platforms now available, such as RADARSAT-1 and 2, the government and its sole provider of armed force, the CF, has the ability to monitor vast areas in support of the national interest. Although there is no immediate military threat to Canada, there still remains the requirement to monitor Canadian territory and its approaches in support of other government departments and to maintain a readiness to act according to the political direction of the government. This is an application of the truism that "Sovereignty is not claimed it is asserted."[31] Major Michael Addison agrees, pointing out that the 1994 Defence White paper

states "the provision of surveillance … is an integral part of the Forces' activities in Canada," thereby placing surveillance responsibilities squarely on the CF.[32] To meet this requirement will mean a change in how the government approaches space.

Integral space-based resources are a matter of national security. The ability to monitor, in real time, sovereign territory and its approaches is more than simply a military matter; it also affects environment, trade, diplomacy, and law enforcement. This makes the ability to provide such monitoring a larger political matter than it might appear at first glance, despite the lack of an obvious military threat. The recent controversy over the blocked sale of MDA to a foreign company highlights and reinforces the difficulties inherent in the prospect of allowing foreign control over Canadian space-based assets. Transfer of Canadian technology and assets to foreign control not only proliferates controlled technology and compromises intellectual property, but also has the potential to block Canadian access to critical data. Therefore, the sale was blocked, not due to any hostility towards the US government, but for the national interest, "that the Canadian government could somehow be denied access to the satellite imagery it had paid for."[33] This, of course, would be unacceptable for a number of reasons, domestic politics being the most pressing in this instance. The blocking of the sale of MDA to American company Alliant Techsystems (ATK) was a touchy subject for many reasons. The prospective purchaser recognized this, and although the purchase was desirable from their corporate perspective, affirmed that it involved "issues [that] touched on sensitive Canadian concerns about national security, national sovereignty and the protection of Canadian technology."[34] Consideration of the implications of such a sale revealed a number of issues that had obvious detrimental consequences for Canadian interests, beyond the loss of intellectual property rights. According to Bruce Cheadle:

> Although the Canadian Government has firm contractual rights on the data for the seven-year life of the satellite … strict U.S. security laws could trump Canadian control of the satellite.… Moreover, ATK has acknowledged that its corporate goal is to build subsequent generations of satellites using the intellectual property from the MDA purchase, and those satellites would be firmly under U.S. legal control.[35]

The potential loss of access to data critical to enforcement of Canadian sovereignty was the overriding concern that led to the blockage decision. "This is about more than a satellite, it is the means by which Canada can control and protect its sovereignty and maintain its maritime awareness."[36] This situation also indicates a need to consider other aspects of Canadian interests in space. We must also consider, given the dependence of the Canadian economy—and the world's—on space-based satellite communications and remote sensing platforms, whether we are prepared to de facto surrender these aspects of our sovereignty. The Honourable Gary Lunn, Minister of Natural Resources, states in connection to the decision, "Canada is right to be proud of its accomplishments, and our government is committed to doing what is necessary to ensure the success of this sector, which is important to the economy as well as to this country's sovereignty in the long term."[37] The international implications (diplomatic) of failure to maintain this important capability are recognized within the government. According to the Minister of Industry, "It is clear that, as we further develop remote sensing capabilities and the next generation of RADARSAT, we must reflect a common vision that will strike a balance" between domestic needs and Canada's international obligations.[38]

As mentioned, future CF involvement in manned space projects should include a revision in approach to personnel. Ongoing space development, beyond the ISS, will require a skilled workforce to support orbital industry. This means that personnel must have the knowledge and necessary skills to operate in such environments. Instead of the CSA's existing recruitment policy, the Air Force should address the future needs of space applications by exploring the secondment of other personnel to CSA. The rationale behind this proposal is simple. It is unreasonable, not to mention a poor allocation of resources, to expect the present astronauts to carry out tasks better suited to technical personnel. While each of these three specialities is valuable, it is hardly effective to connect all orbital functions to them; in other words, the engineer can provide the square root of a pickle jar, it takes the technician/technologist to get the lid off. For example, on the military side, there are numerous highly-trained personnel used to working in hazardous environments (i.e., clearance divers, construction engineers, and various Air Force occupations), which could be valuable sources of talent to carry out orbital construction and other technical tasks, supported by engineers, medical doctors and pilots. As well, this will serve several additional functions. First, this will enable the development of the necessary institutional skills and infrastructure to support the CF in space efforts. Secondly, progress in this area will foster the evolution of a skilled civilian workforce able to contribute to commercial space-related industry with consequent national economic benefits. Thirdly, the commercial industrial expansion made

possible by this would have far-reaching additional economic benefits as new technologies and industries are created—the "spin-off effect" —and based out of Canada.

Governments are not the only source of space-related innovation, skills and knowledge. As an example of what can be accomplished for a modest outlay of resources, a group of amateur radio enthusiasts (Southern Alberta Balloon Launch Experiment [SABLE]) in Alberta have been carrying out high-altitude experiments with digital cameras and weather balloons. Their 11 August 2007 launch (SABLE-3) enabled them to capture images from 117,597 feet (36,183 metres – near space) altitude, after a flight of 2.5 hours followed by a safe recovery.[39] The use of such modest resources (less than $500) to produce these images is indicative of how the ability to produce results from technology has progressed beyond the level where only governments and scientific establishments possessed the capability. Furthermore, according to Tony Rafaat:

> the SABLE projects originated when I was teaching at a Hutterite colony near Hanna, Alberta 4 years ago. My three oldest students built the payload package for SABLE 3 and it's in perfect shape today. So, in terms of expertise, one doesn't need to be a rocket scientist, however, one must show a keen interest and understand the concepts and principles behind the various aspects of the project.[40]

Other examples of non-governmental achievement in space research abound. Michel Fournier of France is involved in an extreme high-altitude (130,000 foot) parachute jump project in Saskatchewan. Intended as a proof of concept for emergency escape and recovery of astronauts, this project will also set new records and build on the earlier USAF experimental jumps by then-Captain Joseph Kittinger in 1957's Project Manhigh. Originally, this type of project required the resources of a government to carry out; however, as knowledge and technology progress, this is now well within private capabilities. The plan in Monsieur Fournier's project is for him to ascend by balloon to an altitude greater than 130,000 feet in a pressurized capsule and return to ground via parachute. The capsule will also be recovered by parachute. Launching from Southern Saskatchewan takes advantage of large tracts of lightly or uninhabited land to provide for ground safety as well as preventing conflict with commercial aviation. The potential presented by such a project goes beyond record-breaking or even proving the ability for astronaut recovery. The deployment and safe recovery of the pressurized capsule will also definitively demonstrate the capability to send a manned lighter-than-air vehicle to extreme altitudes to carry out various missions. This will also indicate, again, the practicality of such systems in military applications as well as scientific research.

These are only brief examples of what is possible from private resources. We must consider the potential applications for government/military of this demonstrated technology. Prospective applications include strategic surveillance utilizing lighter-than-air vehicles (manned, remotely controlled, and autonomous) to carry high-resolution monitoring devices well above the reach of common surface threats. Furthermore, these vehicles would have inherent advantages as to loiter factor and payload capacity, combined with fuel efficiency. Such a vehicle can also be mission configured to fill many roles, from scientific investigation through surveillance and communications to strategic airlift and combat / combat support. Being fully configurable and economic, the Air Force could easily realize "economy of scale" advantages and field such systems in support of operations worldwide.

This "throwback" to First World War technology could be considered by some to be a reversion to a less than first class option; it is, however, practical and worthy of investigation, regardless of its relative "sexiness" when compared to fighters. Lighter- than-air systems such as blimps and aerostats have been used by military forces since before First World War, and are also used today by the USAF as part of its various local, theatre, and strategic surveillance networks. Unfortunately, in the minds of the general public, any mention of lighter-than-air systems evokes two disparate, misleading images: the Goodyear Blimp and the crash of the Hindenburg. Not only are contemporary systems far safer, but the image of advertising vehicles also fails to show the technology's true potential. As one possible example, I would advocate the use of a manned lighter-than-air system capable of travel at high altitude (up to 75,000 feet / 23 kilometres), with at least the capabilities of the present CP140 Aurora Maritime Patrol Aircraft. With a higher payload capacity and greater loiter time, this system would be able to exercise sovereignty patrols over Canadian territory, gathering more data for use by various agencies, for a lower operating cost. This system would also have the capacity to carry weapons loadouts similar to those of the Aurora, with the potential for even greater capacity in both weapons and sensors. Furthermore, drone technology can be married to lighter-than-air systems, allowing the craft to act as a "carrier" for unmanned aerial vehicles. Presently, though, Canadian experience with lighter-than-air remains limited compared to that of other

states. The use of meteorological balloons is widespread in scientific investigation, but otherwise, the sole use of lighter-than-air is in advertising vehicles such as the Bell Blimp.

Commercial players in space are not confined to satellite manufacturers and government contractors. The previously mentioned space tourism corporation, Virgin Galactic, has recently "rolled out" its pre-production prototype passenger craft. The carrier craft (dubbed "White Knight 2," or "Eve," in honour of Mr. Branson's mother) is built by Scaled Composites and will shortly enter flight testing while the sub-orbital spacecraft is built. Virgin Galactic envisions that SpaceShipTwo will be completed in 2009 and the first passenger flights will take place in 2010. It is worth noting that although the corporation has contracted for a passenger craft, it will be capable of cargo operations as well as scientific endeavours.[41] Whether this undertaking will succeed or be of public benefit is open to question. Despite Burt Rutan's previous record of avoiding government or defence contractor involvement in his operations, and Richard Branson's public disdain for government activities in space, American defence contractor Northrop Grumman Corporation has agreed to purchase the remaining 60 per cent of Scaled Composites, to take complete ownership of the company.[42] This change of corporate character will give the defence contractor ownership of the proprietary materials that made the first non-governmental space flights possible. Speculation is that this will also permit the US to maintain its lead in space, at least until other agents gain trouble-free and economical access to space. At the very least it will enable the US to prevent proliferation of this technology, for the time being, to other actors. Although from a Canadian perspective, the barn door on this option may have already swung shut, it would be in national interest to consider "buying into" this technology as an economic option for the launching and servicing of space-based assets.

Concluding Remarks: *Per Ardua Ad Astra*

Presently there is only one "superpower," the US. Following the collapse of the former Soviet Union, with no other "superpower" to provide a counterbalance to the US, various administrations have pursued weaponization of space to varying degrees. Successive American administrations have embarked on a course that will lead to further abrogation of space treaties, including the OST, as well as the previously abrogated ABM treaty. The closest to a counterbalance for the US is found with China, which is aggressively pursuing a manned space program of its own. Additionally, it must be noted that both China and the US have recently demonstrated their ASAT weapons, while concealing other capabilities. Orbital weapons capabilities well within reach of both states include planetary bombardment systems employing WMD as well as kinetic strike projectiles, NMP/EMP effect weapons, directed energy weapons such as high-energy lasers and particle beam weapons, not to mention a wide variety of fragmentation effect weapons for anti-satellite / space vehicle use.

The need for space-based systems consistent with our fiscal and technological capabilities as well as our legitimate requirements is easily demonstrated. Historically, Canada has ignored matters of sovereignty and defence until forced by events to confront them. In the past, there has been sufficient time to react, as well as stronger allies to rely on; however, that is no longer the case, as the narrow window for reaction and the erosion of sovereignty implicit in failing to act renders such arguments useless. Robert Day opines:

> Canada, as a nation, must realize that without the technology we are at the mercy of nations that may hold back such services when it is strategically advantageous to do so.… The development of a Canadian ability to provide its own space-based surveillance must be seen as a major necessity of statecraft if we intend to remain a sovereign and wholly independent country.[43]

A popular science fiction series begins each episode with the words "Space, the final frontier." In the American tradition, a frontier is a place of lawlessness, where anything can happen—and usually does. In Europe, the frontier is the border between two states, usually somewhat hostile to each other. But in Canada a frontier is a place of opportunity, an area to bring under the rule of law, a source of future prosperity, exemplified by the settlement of the prairies and the establishment of the North West Mounted Police. This new frontier that is open to us offers not territory, but economic growth and prosperity and a new set of tools to protect Canadian sovereignty and interests. Canadians cannot afford to yield, by default, the high ground of space, and by extension, part of our sovereignty. Even though we face no present military threat, we must remember that our interests are not the same as our neighbours and that others are prepared to advance their own interests—even at our expense.

It is time for the Air Force, and Canada, to live up to the promise of the cap badge: *Per Ardua Ad Astra.* There will be adversity aplenty, but with leadership . . . the sky holds no limits.

Notes

1. The Honourable Colin Kenny, letter to the author, June 2, 2008.

2. NMP/EMP will disable/destroy/disrupt non-hardened electronic systems within range of the energy pulse. Satellites are extremely vulnerable to this effect and will suffer severe electronic damage although there will be no physical "blast" damage.

3. Michael J. Listner, "It's time to rethink international space law," *The Space Review* (May 31 2005), available online at http://www.thespacereview.com/article/381/1 (accessed March 24, 2009).

4. Despite allegations of US emplacement of WMD in orbit, there is no credible evidence of either the US or the USSR doing so.

5. Taylor Dinerman, "Satellite shootdown overcomes bureaucracy," *The Space Review* (February 25, 2008), available online at http://www.thespacereview.com/article/1068/1 (accessed March 24, 2009).

6. Peter B. Teets, *Counterspace Operations: Air Force Doctrine Document 2-2.1* August 2, 2004, Washington, viii.

7. Nader Elhefnawy, "Long waves and space development," *The Space Review* (June 23, 2008), available online at http://www.thespacereview.com/article/1156/1 (accessed March 24, 2009).

8. Mike Moore, "Call their bluff," *The Space Review* (January 28, 2008), available online at http://www.thespacereview.com/article/1049/1 (accessed March 24, 2009).

9. The US controls access to space according to international and domestic law. Although legislation requires the US government to allow access to space, it also requires the government to regulate access according to various regulations, including those of the FAA. Licences for private launch are difficult to obtain, especially post-9/11, and this was the premise of a Hollywood film, "The Astronaut Farmer," where a private citizen built his own rocket for a space launch despite interference from the various government agencies. Entertaining, but not without its own kernel of truth; private launch and access to space is possible, if the regulators approve the licence. Information on the American regulatory regime available online at http://www.faa.gov/about/office_org/headquarters_offices/ast/ (accessed March 24, 2009).

10. Bruce M. Deblois et al, "Space Weapons," *International Security* 29, no. 2 (Fall 2004), 50-84.

11. Taylor Dinerman, "Space power, now and in the future," *The Space Review* (June 18, 2008), available online at http://www.thespacereview.com/article/891/1 (accessed March 24, 2009).

12. Mike Moore, "Call their bluff." *The Space Review* (January 28 2008), available online at http://www.thespacereview.com/article/1049/1 (accessed March 24, 2009).

13. Deparment of Defense, Annual Report to Congress on the Military Power of the People's Republic of China, Washington: 2005, 28, available online at http://rescommunis.wordpress.com/2008/03/04/373/ (accessed March 24, 2009).

14. The Honourable Jim Prentice, letter to the author, July 31, 2008.

15. Doris H. Jelly, "Canada in Space," *Journal of Distance Education* (1993), available online at http://www.jofde.ca/index.php/jde/article/view/210/635 (accessed March 24, 2009).

16. Canadian Space Agency: "Fort Churchill – a landmark in Canadian space research" [Internet] (August 9, 2008), available online at http://www.asc-csa.gc.ca/eng/sciences/fort_churchill.asp (accessed March 24, 2009).

17. Dan Lindley, "What I Learned Since I Stopped Worrying and Studied the Movie: A Teaching Guide to Stanley Kubrick's *Dr. Strangelove," PSOnline* (2001), available online at http://www.apsanet.org/imgtest/Strangelove-Lindley.pdf (accessed March 24, 2009).

18. Andrew B. Godefroy, "Space and National Security: Canada's Sporadic Strategy, 1985-1999" (1998), available online at http://www.cda-cdai.ca/symposia/1998/98godefroy.htm (accessed March 24, 2009).

19. Canadian Space Agency: *National Paper: The Canadian Space Program* (Montreal: Canadian Space Agency, July 19, 1999), 4.

20. Aaron Jackson, "Defending the 'Empty North': Comparing Canadian and Australian Challenges and Strategies," *Canadian Naval Review* 3, no. 4 (Halifax, 2008), 4-9.

21. Rob Huebert, "Here comes the Age of the Arctic – Ready or Not!" *Canadian Naval Review* 3, No. 4 (Halifax, 2008), 23-40.

22. Ibid, 40.

23. James Oberg, "Phony space weaponization: the case of Radarsat-2," *The Space Review* (June 11, 2007), available online at http://www.thespacereview.com/article/886/1 (accessed March 24, 2009).

24. Tim Lynch, "In Defence of Intellectual Capital" *FrontLine Security* (Ottawa: FrontLine, April/May 2008), 32-33.

25. K. Joseph Spears, "Radarsat-2: Is this Avro Arrow spelled backward?" *FrontLine Defence*, (Ottawa: FrontLine, April/May 2008), 12-13.

26. Bjorn Muller Wille, "EU Intelligence Cooperation. A Critical Analysis," *Contemporary Security Policy*, 23, no. 2 (August 2002), 61-86.

27. Spears, 12.

28. Chris Gainor, "Canada's space program in crisis," *The Space Review* (January 28, 2008), available online at http://www.thespacereview.com/article/1046/1 (accessed March 24, 2009).

29. Taylor Dinerman, "Space and the 2000 ship Navy," *The Space Review* (January 7, 2008), available online at http://www.thespacereview.com/article/1031/1 (accessed March 24, 2009).

30. Randy Boswell. "U.S. signals change in Arctic priorities," *Times Colonist*, August 9, 2008.

31. Lynch, 33.

32. Major Michael Addison, "A Comprehensive Aerospace Surveillance System for the Canadian Arctic," *Canadian Forces Staff College JCSP 33*, (April 23, 2007): 2.

33. Andrew Coyne, "The space where Tory principles used to be," *MacLean's,* April 28, 2008, 14.

34. Taylor Dinerman, "Small satellite builders: a tale of two mergers," *The Space Review* (April 21, 2008), available online at http://www.thespacereview.com/article/1110/1 (accessed March 24, 2009).

35. Bruce Cheadle, "Ottawa 'not satisfied' sale of Radarsat maker MDA is in national interest," *MacLean's*, April 10, 2008. was available online at http://www.macleans.ca/article.jsp?content=n041049A (story no longer available at this link).

36. Spears, 13.

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38. The Honourable Jim Prentice, letter to the author, July 31, 2008.

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Master Seaman William Sparling

Master Seaman William (Bill) Sparling CD MA AScT has been a serving member of the Canadian Forces since 1981. Bill has served in every ship class (steamers, 280s, maritime coastal defence vessels and Canadian patrol frigates) except submarines and AORs (oiler replenishments), around the world, as a Naval Weapons Technician (Gunner). His experience includes active service in the Arabian Gulf (Gulf 1), anti-piracy patrols off South East Asia and Korea, instruction at all levels from basic recruit training and officer training through senior levels of the MOC as well as briefing/instructing senior officers. Offered a commission, MS Sparling has elected to remain in the ranks. He completed his BA (Canadian History / Political Science) from the University of Manitoba under the Canadian Forces University Program and his MA from Royal Military College of Canada (War Studies).

He is married to a wonderful lady, Elizabeth. They have two sons, Will and Robert, and two granddaughters, Elysian and Dahlia. As odd as it might seem to some that a sailor is providing commentary on aerospace issues, MS Sparling is the son of a WW2 Bomb Aimer, who rose through the ranks to WO1 in post war service. As such, he absorbed the concepts of air power long before adulthood and has developed this knowledge since. He has been published internationally, in journals such as "Marine Corps Gazette."

Bill has recently returned to the Canadian Forces Fleet School (Esquimalt) – Combat Systems Engineering Division, as an instructor, for his final posting before retirement. Bill will be embarking shortly on a second MA through Royal Roads University in Disaster and Emergency Management, which will be his next career path.

Chapter 10

Leadership: The Air Dimension

William Lewis

Introduction

There are very few disciplines that receive as much attention and study as leadership. However, in spite of the myriad of articles, books, motivational speakers and courses on the subject, there is clearly not a universally accepted understanding of the scope, breadth, competencies and application of leadership. As explained by Bennis and Nanus, "Leadership competencies have remained constant throughout the years, but our understanding of what it is, how it works, and the ways in which people learn to apply it has changed over the past decades."[1]

There have been many publications on leadership in a military context, but the majority of the writings and empirical research is focused on the United States Army or, more generically, from a land-based construct. Arguably, this focus on army leadership is due to the profession of arms' preoccupation with the "combat-warrior" image.[2] As such, little anecdotal or empirical research is available regarding leadership in the air force, and the majority of what does exist is from the United States Air Force.[3] Furthermore, most leadership research tends to focus on those employed in traditional operator roles, including combat arms, aircrew as well as maritime surface and subsurface officers, with very little attention to the leadership of the large number of military officers and non-commissioned members that support operations.[4] Therefore, this paper will initially explore the concepts of culture and its contributions to leadership, followed by a brief outline of existing publications on Air Force leadership. Then, the current Canadian Forces and Air Force leadership courses will be presented with the intent of demonstrating that these courses do not adequately prepare Air Force leaders. A few of the outdated traditions and myths about leadership will be explored, and a few concluding comments and suggestions will be offered.

Culture

While perhaps not a concept that initially comes to mind when considering leadership, it has been postulated that every organization has a culture.[5] Culture is an abstract concept, defined by Schein as:

> …a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.[6]

Schein goes on to describe culture as a concept that is more than just shared beliefs and traditions. The Canadian Forces' (CF's) leadership doctrine keystone document *Conceptual Foundations* defines culture similarly:

> A shared and relatively stable pattern of behaviours, values, and assumptions that a group has learned over time as an effective means of maintaining internal social stability and adapting to its environment, and that are transmitted to new members as the correct ways to perceive, think, and act in relation to these issues.[7]

Regardless of which definition is chosen, there are three different levels or depths against which an organization can be analysed. Using Schein's taxonomy, the three levels are: artifacts, espoused beliefs and values, and underlying assumptions.

Artifacts are those things that can be visibly observed, such as a culture's symbols, structure, language, ceremonies and rituals as well as its members' mannerisms and interactions. Espoused beliefs and values typically originate with the individual who is the founding leader of the group. The basic underlying assumptions are the most fundamental level of a culture. It is the level from which future behaviour can be most accurately predicted. These shared assumptions have become entrenched and are very difficult to change.[8] But why is culture important to an organization and its leadership?

As explained by Vermillion, there are several reasons that theorists postulate why it is important to understand the culture of an organization.[9] In fact, Schein argues that "the only thing of real importance that leaders do is create and manage culture…the unique talent of leaders is their ability to understand

and work with culture…"[10] Therefore, it is essential, and it may be argued to be of primary importance, that leaders of an organization understand the concept of culture. Culture guides the behaviour of the members of the organization by establishing a set of structures, routines, rules and norms. In many ways, culture is the most visible and identifiable aspect of an organization, which influences personnel both internal and external to the organization.[11] Therefore, it is essential that leaders are aware of and work within the culture to bring about successful change and effective performance.[12]

Most of the literature on a military culture centers on what distinguishes the military culture from the rest of society and concentrates on the military as a profession of arms. From a review of literature, Harries-Jenkins offers that there are two distinctive and widely accepted models of military professionalism: the profession of arms and the pragmatic military profession.[13] The profession of arms was introduced in 1957 by Huntington in his work *The Soldier and the State*. Huntington's concept centers exclusively on the premise that the unique skill of the military profession is the "management of violence" which sets it apart from the rest of society.[14] He further postulates that the military is a profession by its expertise, responsibility and corporateness, and it is these three characteristics that make the military culture unique.

In contrast to this view, Janowitz offers the concept of the "professionalism" of the military. His model acknowledges that the military as a profession is dynamic and the characteristics of the military professional change over time to align with the transformation of the parent society by adopting civilian norms resulting in reducing the difference in skill between military and civilian counterparts.[15] He offered five basic hypotheses that account for this differing viewpoint: changing organizational authority, narrowing skill differential between military and civilian elites, a shift in officer recruitment, the significance of career patterns and trends in political indoctrination.[16] Janowitz did make comment directly on the Air Force, stating that it was the service with the greater tendency for employing technical specialists compared to the Army. Therefore, Janowitz's model is more inclusive than Huntington's and also can be used by the support organizations.

In the United States, especially since the 1960s, a considerable amount of study has taken place regarding military culture and its relationship to society. Perhaps the most controversial is Charles Moskos' institutional/occupational (I/O) thesis, which was introduced in 1977 as a result of the United States military transitioning from conscription to an all volunteer force. Moskos observed significant changes occurring in the military. He proposed that the military was transforming from an institutional organization (one that is value-driven based on the greater good) to an organization that was more occupational (thus demonstrating civilian characteristics that were more focused on self-interest than that of the larger group).[17] Moskos, and fellow researcher Frank Wood, maintained that the tendency towards occupationalism affects military effectiveness in three key areas: mission performance, member motivation and professional responsibility.[18] This I/O model is frequently cited and is the foundation for ongoing research. This research has concluded that there are I/O differences between not only the services but also between the branches within the services. Furthermore, there are intra-service I/O differences between officers and non-commissioned members (NCMs) as well as technical and non-technical branches.[19] In fact, Wood has focused his research on the United States Air Force (USAF). He concludes that the Air Force's dependence on technology results in its officers more likely to specialize and experience a "diffused sense of purpose." This "diffused sense of purpose" can undermine the strength of a culture thus resulting in a fragmented culture. He further concludes, in line with the occupational concept, that pilots had a greater tendency to identify as specialists and that support officers identified themselves as a part of the institution.[20]

There have been other researchers that have investigated, albeit fairly superficially, the differences between USAF operators and supporters. Morabito used the Yukl's Managerial Behaviour Study research instrument (which is based on the behavioural leadership model) to determine the activities that most influence leadership development. He found that the most important activities in developing personal leadership skills were working on the job with NCMs, peers and superior officers. The activities that were the least important were the formal leadership courses.[21]

Phelan conducted a study of USAF majors, with a specific focus on operator and support officers, to determine what behaviours were perceived to be critical to mission accomplishment and successful leadership. As a result of this investigation, he concluded that support officers attributed greater importance to interpersonal skills, while operators attributed greater importance to technical skills.[22]

Finally, Shawn Black examined leader behaviours of squadron commanders of three flying and two maintenance squadrons. This doctoral thesis concluded that most squadron commanders, especially pilots, had very little personal leadership experience prior to taking command which resulted in lower score results compared to a 2004 United States normative sample on transformational and transactional leadership behaviours. They were more likely to use management by exception and laissez-faire behaviours with their subordinates. The study also revealed that the attributes that subordinates, the majority of whom were NCMs, valued most in preferred commanders were strong people skills, trust, honest and fairness.[23]

Investigations into the cultural and leadership differences between the services in the Canadian military have primarily been carried out by Al English. He argues that in order for an officer to assume an operational command, two preconditions must be met: mastery of the profession of arms and earning trust of subordinates "by sharing the risks of those they command."[24] English submits that the first precondition is achievable for non-aircrew, but he ultimately questions whether the second precondition is achievable for non-aircrew.

CF Leadership Education

The critical importance of education, both academic and professional, is well documented in a number of studies undertaken over the last thirty years. Guiding documents such as Defence Strategy 2020, Officership 2020 and NCM Corps 2020[25] have all reached the same conclusion: in order to operate effectively in a complex military environment, all members of the CF require crucial intellectual skills and specific competencies. The CF requires officers and non-commissioned members who have outstanding intellectual ability, who are capable of effective command and who possess the leadership and management skills required in an increasingly uncertain world. As well, experience has indicated that differences between officer and non-commissioned member professional development can no longer be defined by rank, as officers and non-commissioned members deal with many of the same issues.

Reporting to the Canadian Defence Academy (CDA), the Non-commissioned Member Professional Development Centre, situated at the Royal Military College, Saint-Jean, was created on 1 April 2003. Their role focuses primarily on developing, implementing and presenting the NCM professional development requirements for developmental periods three through five. This is accomplished through a combination of distance learning and on-site courses and includes the intermediate leadership qualification (ILQ), the advanced leadership qualification (ALQ) and the chief petty officer, first class / chief warrant officer (CPO1/CWO) chief qualification (CQ). Also under the authority of CDA, the Air Command Academy, located at 16 Wing Borden, is responsible for the primary leadership qualification (PLQ).

The PLQ course is a modular format, with Performance Objective 201 covering the leadership of subordinates. A total of 720 minutes of lectures, or 70 periods, are devoted to leadership. For many, this is their first introduction within the CF to formal leadership education. Unfortunately, the retention and utilization of this new knowledge is only confirmed with multiple choice tests, which clearly is not the best way to demonstrate leadership competencies. The remainder of these courses (ILQ, ALQ and CQ) have a nine to ten week distance learning portion, followed by a residency portion at Saint Jean. Each successive course includes both written submissions plus case studies and lectures to cover their increased leadership responsibilities. However, without the benefit of knowing the differences between services and the exact competencies required of junior Air Force leaders, the material is very much founded in the traditional combat-warrior paradigm.

Also reporting to the CDA is the Canadian Forces Leadership Institute (CFLI), which was established in September 2001 as a centre of excellence for leadership research and professional concept development in the CF. The mandate of CFLI is to research, develop and disseminate core concepts of leadership and the profession of arms to the CF to stimulate and promote an intellectual base for identifying best practices, encouraging professional development, articulating core leadership and professional concepts as well as providing a focus and unity of thought in these domains.[26]

CFLI has sponsored many investigations and papers on various aspects of leadership. One of their more recent sponsorships was an investigation to create the framework for continued professional development for CF general and flag officers and those CPO1/CWO selected for senior appointments, beyond and after the formal courses delivered to senior leaders at the Canadian Forces College. The result of this research was the framework depicted in Figure 1, which consists of five leader elements (expertise, cognitive capacities, social capacities, change capacities and professional ideology). These elements were

derived from an "especially thorough analysis of the suite of 2020 documents, the Profession of Arm Manual (*Duty With Honour: The Profession of Arms in Canada*) and *Leadership in the Canadian Forces:*

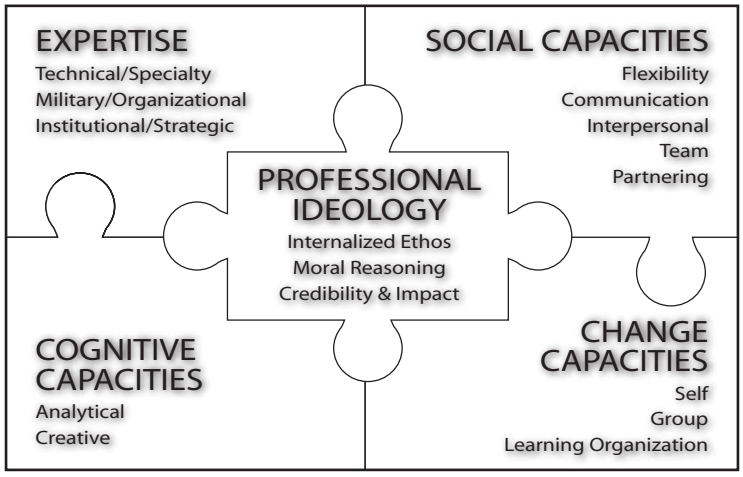

Figure 1: CF Leader Framework[27]

Conceptual Foundations, plus the substantial generic literature on leadership."[28] The framework also contains a total of 16 attributes required of all CF leaders contained within the five elements. The work concludes with a very well structured articulation of the competencies required at the four leader levels (junior, intermediate, advanced and senior) for each of the five elements. The leader development framework is depicted in Figure 2, and an example of the details of one of the elements is included as Figure 3. The challenge will be to recognize this framework and to integrate it as a key design component of the CF. The obvious next step would be to further refine this framework, especially at the junior, intermediate and advanced levels, for the uniquenesses of each service and its associated culture.

		LEADER FRAMEWORK ELEMENTS				
		Expertise	Cognitive Capacities	Social Capacities	Change Capacities	Professional Ideology
LEADER LEVELS	*Senior*	Strategic	Creative Abstract	Inter-Institutional	Paradigm Shifting	Stewardship
	Advanced	↑	↑	↑	↑	↑
	Intermediate	↑	↑	↑	↑	↑
	Junior	Tactical	Analytical	Inter-Personal	Open	Internalize

Figure 2: Leader Development Framework[29]

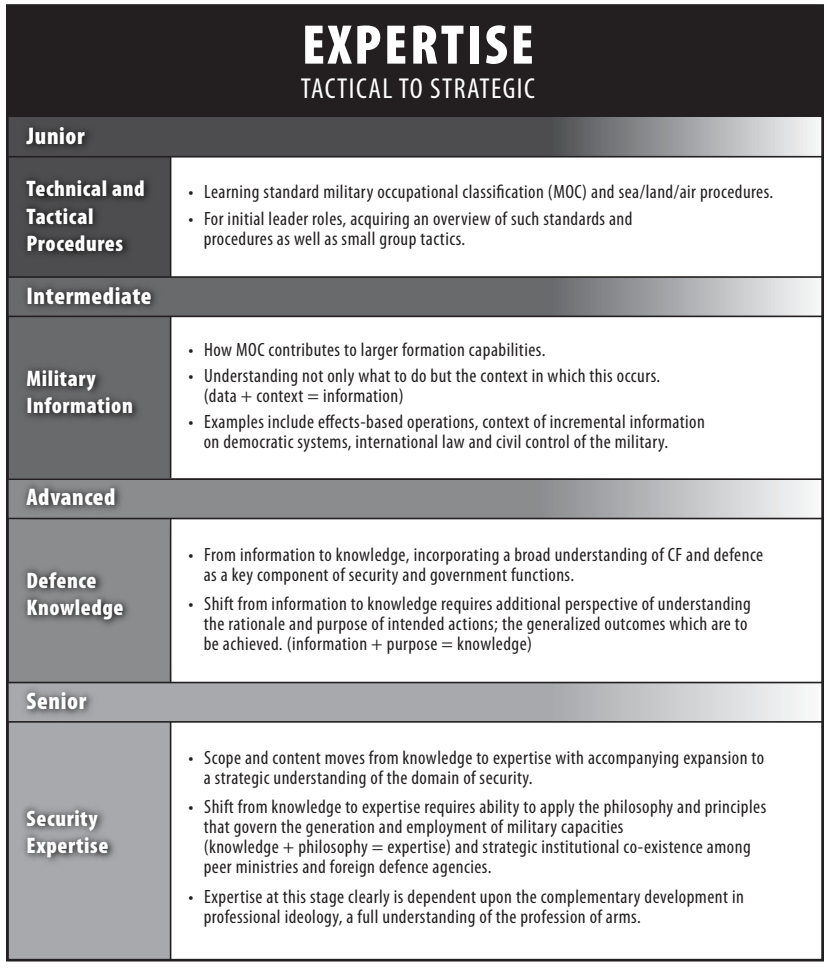

Figure 3: Expertise: Tactical to Strategic[30]

Conclusion

In spite of the breadth and depth of writings and research on leadership, the majority of published military leadership work has been about the land element, specifically the United States Army. Most of the leadership research that does exist regarding the Air Force is primarily focused on aircrew and pilots. This attention is due in part to Harries-Jenkins "combat-warrior paradigm." As such, the realm of those who support those directly responsible for the management of violence has largely gone unstudied.

One of the key concepts to include in any study of unique leadership interactions is the concept of culture. Of the three levels of culture postulated by Schein, the third level of the underlying assumptions are key to leading and managing an organization. Culture guides the behaviours of those within and outside the organization, and it is the distinct job of the leadership to understand and work within this culture.

The study of military culture has been primarily shaped by the works of Harries-Jenkins and Janowitz. More recently, the institutional/occupational thesis by Moskos has received considerable attention. Together with Wood, they have characterized the present military occupations as either focused on the occupational (technological aspects) or on the institutional. The most recent investigations have concluded that the Air Force does indeed have a distinct culture (and indeed subcultures) and that aircrew are more concerned with the occupational aspect, while the majority of the supporting occupations have a more institutional focus.

The Canadian Defence Academy has the responsibility for all CF leadership education. Under their direction, the Air Command Academy administers the primary leadership qualification, while the Non-commissioned Member Professional Development Centre administers the intermediate leadership qualification, the advanced leadership qualification and the CPO1/CWO chief qualification. Each of these latter courses includes both a distance learning and a residency portion. However, without the benefit of a clear understanding of the unique differences required of Air Force leaders, all receive the same combat-warrior education.

Also reporting to the CDA is the Canadian Forces Leadership Institute. One of their recent studies proposed a CF leader framework, which is comprised of five elements (expertise, cognitive capacities, social capacities, change capacities and professional ideology). As well, a leader development framework incorporating four leader levels (junior, intermediate, advanced and senior) across the five elements was suggested. For each of these levels and elements, the work suggested various competencies and strategies to better prepare the leaders of tomorrow. Again, the frameworks are not unique for any Service and, especially for the more junior leadership levels, the Air Force would benefit from some dedicated research so as to ensure our future leaders excel.

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Colonel W.J. Lewis, OMM, CD

Colonel W.J. (Bill) Lewis is an Aerospace Engineer who has held varied operational, staff and academic positions.

After graduation from the Royal Military College of Canada (RMC) with a Bachelor of Chemical Engineering in 1981, his first posting was at Canadian Forces Base Winnipeg in the Base Aircraft Maintenance Engineering Section. Concurrently, he completed a Master of Business Administration degree at the University of Manitoba. Then, returning to full-time studies, Colonel Lewis completed the Aerospace Systems Course 37 in Winnipeg in 1985.

After a year in National Defence Headquarters, as the Deputy Aircraft Engineering Officer for the CT133 and CT114 aircraft, he returned to RMC to complete a Master of Nuclear Engineering degree. After graduation, Colonel Lewis remained at RMC as a member of the Academic Faculty in the Department of Chemistry and Chemical Engineering for the next three years. During this time, he also completed both a Bachelor and a Master of Education from Queen's University.

Colonel Lewis was then posted in 1991 to the Aerospace Maintenance Development Unit (AMDU) at Trenton. At the same time he became the first military adjunct professor at RMC and has remained in this capacity for the past 17 years. While at AMDU, Colonel Lewis completed his PhD in Nuclear Engineering. After a three-year tour and promotion at AMDU, Colonel Lewis was posted to the 8 Air Maintenance Squadron at 8 Wing Trenton where he participated in Operations AIRBRIDGE, ASSISTANCE *and* ASSURANCE. *In 1997, Colonel Lewis was posted to Ottawa as a member of the Chief of the Air Staff and received the Order of Military Merit in 1998.*

In 2001, Colonel Lewis returned to Trenton as a Flight Commander at the Aerospace and Telecommunications Engineering Support Squadron. He then completed Command and Staff Course 29 which included a Master of Defence Studies degree from RMC. Colonel Lewis was posted to 8 Wing in 2003 as the Wing Administration Officer. He was also the Acting Wing Commander for 8 Wing Trenton between December 2003 to July 2004. In June 2004, he became the Commanding Officer of 8 Air Maintenance Squadron, the largest Squadron in the Canadian Air Force. In July 2007, he was posted to the Canadian Forces Aerospace Warfare Centre and was responsible for doctrine development.

Colonel Lewis was promoted to his present rank in July 2008 and posted to National Defence Headquarters as the Director of Coordination in the Strategic Joint Staff.

List of abbreviations

6 RD	6 Repair Depot	GRS	general Reconnaissance School
A/V/M	Air Vice-Marshal	I/O	institutional/occupational
ABM	Anti-Ballistic Missile	ILQ	intermediate leadership qualification
ADC	Air Defence Command	ISIS	International Satellites for Ionospheric Studies
ADG	Air Defence Group		
AFC	Air Force Cross	ISS	International Space Station
AFHQ	Air Force Headquarters	JCS	Joint Chiefs of Staff
ALQ	advanced leadership qualification	JIMP	joint, interagency, multinational and public
ANS	Air Navigation School	LAC	Library and Archives Canada
ASAT	antisatellite	MAD	mutual assured destruction
ATK	Alliant Techsystems	MCC	Military Co-operation Committee
BBMM	Base Borden Military Museum	MDA	MacDonald, Dettwiler and Associates
BCATP	British Commonwealth Air Training Plan	MG	manuscript group
BCHS	Brome County Historical Society	MND	Minister of National Defence
CAF	Canadian Air Force	MOC	military occupational classification
CAS	Chief of the Air Staff	MOL	manned orbital laboratories
CAvM	Canada Aviation Museum	MPA	maritime patrol aircraft
CD	Canadian Forces Decoration	NAC	National Aeronautical Collection
CDA	Canadian Defence Academy	NAFD	National Air Force Day
CDS	Chief of the Defence Staff	NAM	National Aviation Museum
CF	Canadian Forces	NASM	National Air and Space Museum
CFLI	Canadian Forces Leadership Institute	NATO	North Atlantic Treaty Organization
CGS	Chief of the Army General Staff	NCM	non-commissioned member
CinC	Commander-in-Chief	NCO	non-commissioned officer
CO	commanding officer	NDHQ	National Defence Headquarters
COSC	Chief of Staff Committee	NMP/EMP	nuclear-magnetic pulse / electro-magnetic pulse
CPOS	Canadian Pacific Ocean Services		
CPS	Chief of Personnel Services	NMST	National Museum of Science and Technology
CQ	chief qualification		
CSA	Canadian Space Agency	NORAD	North American Air Defense Command
CWM	Canadian War Museum	NRC	National Research Council of Canada
DCER	Documents on Canadian External Relations	OBE	Order of the British Empire
DFC	Distinguished Flying Cross	OC	Officer Commanding
DHH	Directorate of History and Heritage	OMFC	Overseas Military Forces of Canada
DHist	Directorate of History	OST	Outer Space Treaty
DM	Deputy Minister	P/P/O	provisional pilot officer
DND	Department of National Defence	PJBD	Permanent Joint Board on Defence
EAC	Eastern Air Command	PLQ	primary leadership qualification
F/L	flight lieutenant	ECS	Environmental Chief of Staff
G/C	group captain	RAF	Royal Air Force
GPS	Global Positioning System	RCAF	Royal Canadian Air Force
GR	general Reconnaissance	RCAFM	Royal Canadian Air Force Museum

RCN	Royal Canadian Navy	SBO	Senior British Officer
RFC	Royal Flying Corps	SDI	Strategic Defense Initiative
RG	record group	sgt	sergeant
RMC	Royal Military College	TC	Training Command
RN	Royal Navy	US	United States
RNAS	Royal Naval Air Service	USAF	United States Air Force
S/L	Squadron Leader	UWO	University of Western Ontario
SAC	Strategic Air Command	VKS	Russian Military Space Forces
SACEUR	Supreme Allied Commander Central Europe	W/C	Wing Commander
POW	prisoner of war	WMD	weapons of mass destruction
SAO	Senior Administrative Officer	WO	warrant officer