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AIR AND SPACE INTEROPERABILITY COUNCIL AND THE RCAF

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JCSP 38

Master of Defence Studies

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PCEMI 38

Maîtrise en études de la défense

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CANADIAN FORCES COLLEGE – COLLÈGE DES FORCES CANADIENNES

JCSP 38 DL – PCEMI 38 AD

2011-2013

MASTER OF DEFENCE STUDIES – MAÎTRISE EN ÉTUDES DE LA DÉFENSE

AIR AND SPACE INTEROPERABILITY COUNCIL AND THE RCAF

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Word Count: 19,920

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LIST OF ABBREVIATIONS

ABCA	Australian, British, Canadian, Australian Armies
AE	Aeromedical Evacuation
AOC	Air Operations Centre
ASCC	Air Standardization Coordinating Committee
ASIC	Air Space Interoperability Council
AU.....	Australia
AUSCANZUKUS.....	Australia, Canada, New Zealand, United Kingdom, United States
CAF.....	Canadian Armed Forces
CBRN.....	Chemical, Biological, Radiological and Nuclear
CFDS.....	Canadian Forces Defence Strategy
DRDC	Defence Research and Development Canada
FASOC.....	Future Air Space Operating Concept
ISR	Intelligence, Surveillance & Reconnaissance
MC	Management Committee
MCC.....	Military Cooperation Committee
NATO	North Atlantic Treaty Organization
ND.....	National Director
NZ	New Zealand
PJBD	Permanent Joint Board on Defence

RAAFRoyal Australian Air Force
RCAFRoyal Canadian Air Force
RAF.....Royal Air Force
RCNRoyal Canadian Navy
RN.....Royal Navy
RNZAFRoyal New Zealand Air Force
SGSteering Group
STANAGSNATO Air Standardization Agreements
UK.....United Kingdom
USUnited States
USAFUnited States Air Force
USN.....United States Navy
WG.....Working Group

ABSTRACT

Seamless interoperability for the Royal Canadian Air Force (RCAF) has been the vision and dream of air force commanders since the end of the Second World War. Since 1948, Canada has participated in an organization whose ultimate objective of its signatories was ensure the improvement of mutual defence in future wars by minimizing materiel, technical or logistical obstacles.¹ What began as the Air Standardization Coordinating Committee (ASCC) in 1948 has evolved to the present-day Air and Space Interoperability Council (ASIC). Through the years, the name of the group may have changed and the structure may have evolved, but the vision still stands with the enhancement of coalition warfighting in the domains of air and space interoperability.²

Geographically based in Washington, DC the original three signatories to the ASCC were the RCAF, the United States Air Force (USAF) and the Royal Air Force (RAF). ASIC comprises the original nations with the addition of the Royal Australian Air Force (RAAF) and the Royal New Zealand Air Force (RNZAF). When combined, these nations are officially referred to as the Five Eyes nations.

This paper examines the RCAF's participation in ASIC and concludes that the investment in this forum is worth the dividend paid. Following a brief historical discussion; an examination of ASIC's structure, mission and values; ASIC influence on RCAF activities contributing to the Defence of Canada; examples of ASIC activities enhancing RCAF interoperability, the conclusion will be evident that RCAF participation in ASIC is well worth the investment of manpower and resources.

¹Air Standardization Coordinating Committee, *Agreement on the Air Standardization Coordinating Committee*, (Washington: Feb 1948), 2.

²Air and Space Interoperability Council, *Capstone Concept Document*, (Washington: 2012 Version), 1.

CHAPTER 1

INTRODUCTION

Interoperability

Canada has long enjoyed close defence ties with the United States. The inextricable geographical proximity to the United States has resulted in continental defence commitments for decades; and the desire to act on a global scale has also seen Canada deploy its armed forces personnel to work with those of the United States around the world in numerous operations. As a result, a long-standing requirement of the Government of Canada and the Canadian Armed Forces (CAF) has been interoperability with the United States armed forces. However, Canada also committed to maintaining interoperability with numerous global allies; and in particular nations such as Australia, New Zealand and the United Kingdom are important with respect to influencing Canada's defence policies. The key to interacting with these allies is striking the balance between political independence and military interoperability. Pivotal to that balance is Canada's participation in the five-nation Air and Space Interoperability Council.

Numerous definitions of interoperability can be found in countless doctrinal manuals but are not the focus of this paper. Nonetheless, it is important to outline a common interpretation from an Allied point of view. Simply defined, interoperability is "a state in which forces and equipment can operate together to accomplish the mission."³ Conceptually, interoperability sits in the middle of a spectrum between low end compatibility and high end complete integration. To help illustrate the concept, one can view compatibility as a state when coalition personnel and equipment co-exist without affecting each other's function; whereas complete integration is achieved when there

³Air and Space Interoperability Council, "Vision and Mission," accessed 4 Jan 2016, <http://airstandards.org>

exists a functional interdependence of personnel and equipment. The low end of the spectrum is not effective and the high end is not achievable; therefore interoperability aims to achieve improved cooperation amongst coalition forces.⁴

The ASCC

Seamless interoperability for the Royal Canadian Air Force has been the vision and dream of air force commanders since the end of the Second World War. Easier stated than achieved in reality, numerous initiatives have garnered the attention of the Government of Canada and the Department of National Defence. It is for that reason Canada has participated in an organization that began as the Air Standardization Coordinating Committee in 1948. The ultimate objective of the ASCC signatories, at least from an air force perspective, was to minimize technical and materiel obstacles by establishing common standards from an engineering standpoint.⁵ The founding vision of the ASCC was to improve interoperability between the United States, Canada, and Britain aided through exchanging equipment for test purposes.⁶

This paper discusses the close historical collaboration that Australia, Canada, New Zealand, the United Kingdom and the United States have shared. Stemming from Allied efforts throughout the Second World War, these five countries forged further agreements creating collaborative military organizations that still exist today. The term “Five Eyes” refers to the collective of these five nations, but it is important to understand the origin of the term. The United Kingdom and the United States shared a close relationship in the realm of intelligence during the Second World War that eventually

⁴Danford Middlemiss and D. Stairs, “The Canadian Forces and the Doctrine of Interoperability: The Issues,” in *Geopolitical Integrity*, (Montreal: The Institute for Research on Public Policy, 2005), 155.

⁵ASCC, *Agreement on the Air Standardization Coordinating Committee...*, 2.

⁶Emily O. Goldman and L.C. Eliason, *The Diffusion of Military Technology and Ideas*, (Stanford: Stanford University Press, 2003), 102.

included Canada, Australia and New Zealand. Intelligence documents releasable to all five nations were therefore designated “AUS/CA/NZ/UK/US EYES ONLY.” This became somewhat burdensome, hence the eventual adoption of the practical “Five Eyes.” term.⁷ The historical collaboration of the nations resulted in an organization whose aim was to improve Five Eyes air force interoperability.

The original mandate of the ASCC aimed to create, ratify and implement Air Standards by member nations to improve interoperability. Standardizing facets of military technologies and materiel was thought to improve interoperability naturally. The process of developing standardization theoretically resulted in an ascending scale of improved collaboration between allied forces. At the least, rendering forces compatible and gradually improving to a minimal interoperability, standardization offered greater commonality amongst allies and greater potential for interchangeable allied forces.⁸

Over the decades however, the ASCC faced numerous challenges in justifying its existence. Much like the North Atlantic Treaty Organization (NATO), whose member nations are challenged to establish common acceptable standards, the member nations of ASCC established less Air Standards than was originally envisioned. By the 1980s, this threatened the existence of the multi-national organization and ASCC members “recognized that the continued lack of materiel standardization between themselves placed the program’s future relevance in doubt.” Facing extinction, the ASCC shifted its focus away from the purely technical, materiel and engineering Air Standards towards an increased emphasis on basic interoperability. The paradigm shift that occurred was that

⁷Canadian Defence and Foreign Affairs Institute, “Canada and the Five Eyes Intelligence Community,” last modified Dec 2012, accessed 9 Jan 2016, <https://www.opencanada.org/features/canada-and-the-five-eyes-intelligence-community/>

⁸T.J. Danaher, *The Role of the Monitoring Committee in the ASCC Programme*, (No references, Washington: 17 Nov 1965), Held on file at the ASIC MC offices.

common standardized military equipment was no longer essential to interoperability. ASCC allies could achieve interoperability through common doctrine, procedures, training and exercises.⁹

ASCC went through yet another round of transformation in 2005 and evolved into the present-day ASIC. With the goal of addressing the global shift towards expeditionary operations in a coalition environment, ASIC authorized an external study “to examine the internal organisational processes and structures, as well as identifying changes required of the ASCC in order to remain valid in a post-Cold War, post ‘9/11’ international security environment.”¹⁰ The re-naming of ASCC to ASIC was thus a response to this shift in the global strategic environment. Although the name of the organization may have changed, the vision still stands “with a mandate to enhance coalition warfighting capability through air and space interoperability.”¹¹ However, the challenge of balancing the concern for political independence whilst attempting to enhance military interoperability is one that ASIC constantly faces and is addressed in this study.

Literature Review

Existing literature on this topic has established two distinct points of view. The first opinion postulates that increased interoperability directly diminishes Canadian sovereignty and the second point of view is that increased interoperability is exercising sovereignty. Danford Middlemiss and Denis Stairs state that seamless interoperability with the United States, for example, “may make it more difficult for Ottawa to refuse

⁹Goldman and Eliason, *The Diffusion of Military Technology and Ideas...*, 102.

¹⁰Air and Space Interoperability Council, *Governance Document Vol 3: Operating Concept*, (Washington: 2014 Version), 2.

¹¹ASIC, *Capstone Concept Document...*, 1.

requests to contribute to American-led operations.”¹² For minimal annual investment to participate in ASIC, the Government of Canada delivers a greater degree of interoperability to the RCAF. The activities of ASIC provide a two-fold advantage; first, translating into considerable gains for the RCAF and second, influencing allied defence policy, thus preserving a modicum of desired political independence for the Government of Canada.

Numerous critics postulate that greater interoperability diminishes Canada’s sovereignty arguing it “will diminish Canada’s international independence.”¹³ Michael Byers argues that the increased cost of defense interoperability directly diminishes the ability of the Government of Canada to wield power at the international level. He states that “historically, Canada has punched above its weight, not because of a powerful military but because of a willingness to act for the global good.”¹⁴ However, as Byers asserts, the increased costs associated with increased interoperability reduces the Government of Canada’s options to participate in globally favorable peacekeeping efforts and domestic sovereignty Arctic patrol missions, to which Byers states “the reductions in peacekeeping and sovereignty assertion also affects Canada’s standing and influence abroad.”¹⁵ Similar to Byers’ opinions, other publications reflect the same sentiment.

Although his article *Sailing in Concert: The Politics and Strategy of Canada-US Naval Interoperability* is decidedly navy oriented, the salient point that Joel Sokolsky argues is that increased interoperability with the United States reduces Canadian sovereignty in that it “is not likely to permit Ottawa greater voice or leverage in

¹²Middlemiss and Stairs, *The Canadian Forces and the Doctrine of Interoperability: The Issues...*, 157.

¹³This line of argument is outlined in Eric Lerhe, *At What Cost Sovereignty? Canada-US Interoperability in the War on Terror*, (Halifax: Dalhousie University Centre for Foreign Policy Studies, 2013), 1.

¹⁴Michael Byers, *What is Canada For? Intent For A Nation*, (Vancouver: 2007), 182.

¹⁵*Ibid*, 182.

Washington.” The argument is that Canadian dependence on United States military technology and firepower jeopardizes the ability of the Government of Canada to independently act when called upon by the United States to participate in operations that might be less aligned with Canadian foreign policy.¹⁶

Dr. Eric Lerhe, argues just the opposite in *At What Cost Sovereignty? Canada-US Interoperability in the War on Terror*. He succeeds in his ultimate aim to “challenge the prevailing narrative that Canada-US interoperability undermines Canadian sovereignty.” Lerhe examines the history of Canadian interoperability and evaluates six case studies that purportedly tested whether Canada could maintain a level of sovereignty and at the same time maintain close military ties with the United States. He conclusively demonstrates that “much of the current Canadian interoperability narrative is wrong.”¹⁷

Argument

The following study supports Lerhe’s position. Focusing on ASIC specifically, it argues that increased interoperability within the Five Eyes partners directly contributes to an increase in Canada’s ability to maintain sovereignty while improving the RCAF’s air power contribution to Canadian defence. The Government of Canada recognizes that in “this increasingly unstable international environment, Canada must have armed forces that are flexible, responsive and combat-capable for a wide range of operations, and that are able to work with our allies.”¹⁸ ASIC addresses these requirements as a council that identifies and provides solutions to interoperability gaps plaguing modern day air forces.

The paper will examine the RCAF’s participation in ASIC and show that the

¹⁶Joel Sokolsky, “Sailing in Concert: The Politics and Strategy of Canada-US Naval Interoperability,” *Choices. National Security and Interoperability* 8, no.2 (April 2002): 14.

¹⁷Lerhe, *At What Cost Sovereignty? Canada-US Interoperability in the War on Terror...*, 11-13.

¹⁸Privy Council Office, *Securing an Open Society: Canada’s National Security Policy*, (Ottawa: Privy Council Office, 2004), 50.

investment into this multi-national organization is worth the dividend paid. The fact that Canada participates in ASIC is often overlooked and the potential benefits of ASIC participation are not widely known throughout the RCAF. This paper addresses detractors' suggestions that Canada's involvement in multinational defence arrangements threaten Canada's sovereignty by clearly demonstrating that Canada's participation in interoperability organizations such as ASIC strengthens and asserts sovereignty. Canada seeks to improve interoperability through participation in ASIC working groups which address the full spectrum of multi-national allied operations. This participation reinforces Canadian sovereignty while improving RCAF interoperability. To achieve this goal, four chapters will present a logical argument.

Chapter two presents a brief history of the formation and mandate of ASCC as the precursor to ASIC. Discussing its genesis as a standardization committee and eventually evolving towards interoperability, this chapter also discusses the ASCC initial mandate, work method and output, plus the addition of Australia and New Zealand and the Canadian air force's doctrinal shift away from the United Kingdom towards the United States. The chapter concludes with a description of the successes and challenges that prompted ASCC organizational evolution leading to the creation of ASIC.

Chapter three examines ASIC's structure. It specifically discusses the organization's various groups and committees, how it conducts business and receives its strategic direction. Chapter three also describes how the ASIC Working Groups exchange information to address the full spectrum of air force operations relevant to the RCAF, with particular focus on doctrine and the influence on Canadian air force activities.

Chapter four discusses the benefits to the RCAF through membership in ASIC. It

also examines the other ASIC nations, highlighting the stressors and successes they have experienced. The chapter addresses costs, describes events that have validated RCAF ASIC membership, and concludes with a discussion of the interoperability and sovereignty issue. Lastly, the Conclusion summarizes the four previous chapters and reinforces the main argument that the minimal investment entailed in Canadian membership in ASIC benefits the Government of Canada and the RCAF's ability to deliver air power effects in support of Canadian defence policy.

This paper is written with the goal of increasing CAF senior leadership awareness of the existence, understanding of and modern day applicability of ASIC. The opportunity exists now to realize the underutilized potential of ASIC. The minimal budget, manpower and resources that Canada has provided for the past 68 years as a member of ASIC is posturing the RCAF to benefit from improved interoperability thus providing the opportunity to truly forge through adversity to the stars.

CHAPTER 2

ASCC HISTORY, FORMATION AND EVOLUTION

Introduction

On 5 February 1948, the ASCC was formed. It was the culmination of groundbreaking conferences held that winter between the RCAF, RAF, and the USAF on the subject of enhancing standardization. Although the world was recovering from a devastating global total war, further aggression and conflict was a distinct possibility with the growing communist-liberal democracy ideological animosity that marked the Cold War. The United States, United Kingdom and Canada entered into numerous agreements to ensure benefit to their respective armed forces if and when they were forced to fight together once again in the future. One of these agreements resulted in the forerunner to ASIC, the ASCC.

This chapter explores the formation and mandate of ASCC as the precursor to ASIC and discusses its genesis as a standardization committee. With the addition of Australia in 1964 and New Zealand in 1965, the ASCC grew to five nations strong. Government of Canada support of RCAF participation was crucial to the early success of the work produced by the ASCC, such as information exchange, which positively contributed to standardization in the early years.

The latter part of this chapter explores the success and failure of the ASCC in its first 30 years, which became less relevant in the 1980s. The first iteration of evolution for the ASCC occurred in 1982 as a result of the RAND Corporation review. This review served as the catalyst for re-design; introducing efficiency and focused direction allowing for a partially successful evolution of the ASCC.

Standardization: A Culture Shift

Based on the extensive increase in defence cooperation and collaboration following the 1940 Ogdensburg Agreement and the creation of the Permanent Joint Board on Defence (PJBD), in 1946 the United States and Canada continued bi-national planning with the creation of the Military Cooperation Committee (MCC). Continental defence continued to be an important concern of the two countries following the Second World War,¹⁹ and the issue of greater standardization between their military forces emerged as a key issue.

Canada had proven itself a capable ally during the Second World War. With the war over, the question arose as to whether or not Canada was prepared to defend North America against new threats. The dilemma laid in the fact that securing continental defence while retaining sovereignty was difficult when the reality of the situation required substantial collaboration with the United States. Prime Minister Mackenzie King worked diligently to ensure Canada's commitment to continental defence was of sufficient importance so as to assure the United States, "while at the same time reassuring the Canadian public that sovereignty was not at risk."²⁰ The PJBD and the MCC served as the catalyst for numerous bi and tri lateral agreements signed by Canada, the United Kingdom and the United States.

The 1947 Statement of Standardization of Military Equipment is an example of such a tri-lateral agreement. Throughout the Second World War, Canada employed the use of British or American built equipment – each with their unique incompatibilities.

¹⁹James Eayrs, *In Defence of Canada: Peacemaking and Deterrence, Volume 3*, (Toronto: University of Toronto Press, 1965), 336.

²⁰Rob Huebert, *Thawing Ice- Cold War. Canada's Security, Sovereignty and Environmental Concerns in the Arctic*, (Winnipeg: University of Manitoba, Centre for Defence and Security Studies, 2009), 26.

The goal of the 1947 agreement was to ensure that a common design enabled a common manufacturing process and therefore a standard resultant product. Standardization of future military equipment theoretically helped to mitigate any future interoperability obstacles that may arise in future conflicts.²¹ It also entailed a significant cultural shift for the RCAF.

Prior to the Second World War, the RCAF employed predominantly RAF doctrine and rank structure, whilst operating predominantly British-designed equipment. During the Second World War, at a time when the RCAF was one of the largest air forces in the world, there was a gradual shift in ‘the Canadian way’ that RCAF squadrons operated overseas and the result was a shift in culture away from purely RAF to more of a Canadian version that was uniquely RCAF. Allan English in *Understanding Military Culture: A Canadian Perspective* asserts that the ‘Canadianization’ of RCAF squadrons continued into the Cold War. Now operating predominantly American built aircraft while employing predominantly American air doctrine, RCAF and United States squadrons worked very closely in North American Air Defence Command (NORAD) and NATO contexts, resulting in a cultural and doctrinal shift that saw the RCAF drift away from the traditional RAF model towards that embraced by the United States.²²

Even during the closing years of the Second World War, Canadian political leaders were drafting proposals for the post-war RCAF structure. Having established one of the world’s largest air forces at that time with 206,350 personnel, the RCAF was given an establishment of only 16,100 personnel by February 1946. The RCAF reverted to its

²¹United States Department of State, Office of the Historian, “Draft Statement on Standardization of Military Equipment Between the Armed Forces of the United Kingdom, United States and Canada,” [Document 66], accessed 24 Feb 2016, <https://history.state.gov/historicaldocuments/frus1947v03/d66>

²²Allan Douglas English, *Understanding Military Culture: A Canadian Perspective*, (Montreal and Kingston: McGill - Queen’s University Press, 2004), 95.

pre-war roles of aerial photography, air transport and support to communications. Many negative lessons had been learned during the Second World War, namely that RCAF components had been distributed throughout the RAF and placed under operational RAF command. The Canadian government was hindered in efforts to highlight RCAF successes; which diminished support for wartime efforts as well as recognition from Canada's allies.²³

Given the experience during the Second World War, the Canadian government sought to distance itself from the British government with respect to defence.²⁴ This phenomenon became most apparent in the RCAF; as Richard Goette explains, "with regard to equipment, aircraft, doctrine and culture, the RCAF was moving farther from the RAF model and towards that of the USAF during the 1950s."²⁵ Moreover, Canada's geo-strategic situation during the early Cold War indicated the logic of a closer defence relationship with the United States.

Canada's geographical position in between the two post-war superpowers meant that it would be on the front line of any Cold War conflagration. Defence agreements signed with the United States meant then (and continue to mean) that Canada's ally and neighbour is its best insurance policy. Canada relies heavily on the United States for security. That fact combined with the "post-1945 drift away from Canada's previous great power patron, the United Kingdom, towards the United States" meant that the

²³Allan Douglas English and Colonel John Westrop (Ret.), *Canadian Air Force Leadership and Command: The Human Dimension of Expeditionary Air Force Operations* (Trenton: Canadian Forces Aerospace Warfare Centre, 2007), Chapter 2.

²⁴John Blaxland, *Strategic Cousins: Australian and Canadian Expeditionary Forces and the British and American Empires* (Kingston and Montreal, McGill-Queen's University Press, 2006), 104.

²⁵Richard Goette, "A Snapshot of Early Cold War RCAF Writing on Canadian Air Power and Doctrine," *The Royal Canadian Air Force Journal* Vol.1, no.1 (Winter 2012): 56.

RCAF had to be able to interoperate with the USAF.²⁶ This led to the logical formation of the ASCC.

The Establishment of the ASCC and its Early Years

ASCC's original mandate was to improve interoperability between Canada, the United Kingdom and the United States. The Second World War had taught these three allies that the successful conduct of combined operations depended on the ability to reduce the number of obstacles that potentially degraded interoperability. Establishing acceptable standards for equipment, thus enhancing commonality, was considered paramount in the removal of said obstacles. A by-product of producing air standards for air materiel was "the exchange of research and development information."²⁷ With the ability to formally exchange equipment for test purposes at no cost, ASCC member nations increased collaborative efforts to reduce non-standard equipment that existed in their post-War inventory.²⁸

ASCC's first focus was on air compatibility among the air forces of the three signatory nations. In particular, the committee worked towards ensuring compatibility on an operational level so that "it should be possible in the early stages of a future war for the air force of one country to be able to operate from bases of another country before the arrival of their stores and equipment."²⁹ Economic use of mutual resources was a fundamental tenet to achieve this aspiring goal. A comprehensive list of capabilities was developed to ascertain if the three air forces could "use each other's airfields and base

²⁶Jeffrey Collins, "The Perpetual Search for Efficiency: The Canadian Approach to the RMA and Military Transformation," in *Reassessing the Revolution in Military Affairs: Transformation, Evolution and Lessons Learnt* (Ottawa: Carleton University, 2015), 52-53.

²⁷Air and Space Interoperability Council, "Home Page", accessed 4 Jan 2016, <http://airstandards.org>

²⁸Goldman and Eliason, *The Diffusion of Military Technology and Ideas...*, 102.

²⁹ASCC, *Agreement on the Air Standardization Coordinating Committee...*, para 3.

organizations, communications, operational procedure, navigational aids, bombs and ammunition.”³⁰ The list revealed that certain areas already shared sufficient compatibility, whereas others warranted further investigation. Working parties were struck to address these interoperability “gaps.” It is important to note that the word *interoperability* did not appear in any of the ASCC foundation documents. The lessons learned from the Second World War had come with a very high price and one that governments were not willing to pay once more in future conflicts. As Franklin B. Cooling and John A. Hixson have noted, “historically, the problems of interoperability have been solved...primarily through trial and error during actual combat operations over an extended period of time.”³¹

Desiring to never repeat the hard-learned lessons of Second World War interoperability shortcomings, the Canadian, American and British governments made concerted efforts to align military efforts. The common understanding at the time was operations were rendered more effective if allied forces had standardized equipment and technology. Thus the concept of improved standardization was seen as the most effective avenue to pursue.³² Although formed to address *standardization* issues, ASCC was unknowingly working on the earliest of interoperability issues for the RCAF. Seventeen working parties were formed over the course of the following three decades; addressing such disparate issues as standards for fuels, aerial photography, airspace management, airfield management, aerospace medicine and air armament, to name a few.³³

³⁰*Ibid*, para 4.

³¹Franklin B. Cooling and J.A. Hixson, *Lessons of Allied Interoperability: A Portent For The Future?* (Carlisle Barracks: US Army War College Strategic Studies Institute, 1978), 3.

³²Lawrence Aronsen, *American National Security and Economic Relations with Canada, 1945-1954* (Westport: Greenwood Publishing Group, 1997), 79.

³³Air Standardization Coordinating Committee, *Air Standardization Coordinating Committee Instructions 16th Edition*, (Washington: May 2002), 1 A-1.

Through the use of working parties, ASCC participant nations secured an avenue to exchange information used to improve their capacity to operate together. Information exchange proved to be the most valuable of ASCC activities, followed by collaborating on research and development initiatives. In this regard, the foundation document establishing the ASCC declared, “in the field of research and development there should be the fullest exchange of military characteristics and operational requirements that is possible.”³⁴ Although standardization was the mandate for ASCC nations, the use of the same equipment and procedures was not always feasible. Sharing ASCC research and development information reduced the overall costs to nations, thereby promoting economies in effort and cost.

The initial structure of the ASCC consisted of two-star air force officers from each country (two Air Vice-Marshals, one RAF and one RCAF, and a USAF Major General) as well as three other officers to act as the Steering Group (SG)³⁵. Air Vice-Marshal A.L. Morfee was the RCAF’s Air Member for Air Plans and was responsible for acquisition of air materiel (new airplanes and capabilities); Air Vice Marshal J.D.I. Hardman was the RAF’s Assistant Chief of the Air Staff (Operations), responsible for all RAF operational requirements; and USAF Major-General E.E. Partridge was the Director of Training and Requirements.³⁶ Clearly chosen to ensure improved probability of commonalities in future acquisitions within their respective air forces, the three general officers oversaw the activities of ASCC.

The 1947 Statement on Standardization of Military Equipment signed by Canada, the United Kingdom and the United States was the catalyst for subsequent agreements

³⁴ASCC, *Agreement on the Air Standardization Coordinating Committee...*, Appendix, para 6.

³⁵Note: The Steering Group member composition has evolved over the years, yet retains the same name.

³⁶*Ibid*, para 4.

that united the three countries in the spirit of endeavouring to perpetuate military commonalities both in doctrine and equipment acquisition.³⁷ Although commonality was the goal, the RCAF began to align its doctrine more closely to that of the USAF rather than with the RAF. For many years, the RCAF had relied on RAF doctrine but following the Second World War and the shift towards North American continental defence, Canada slowly migrated towards the adoption of and alignment with USAF doctrine.³⁸ Adding to the further alienation of RAF collaboration, additional agreements had been entered into between Canada and the United States. The most important was the agreement on the air defence of North America – the creation of the North American Air Defence Command in 1957.³⁹

Canada and the United States established a military legacy during the Second World War and continued to build on that legacy with the creation of the “most visible and well known partnership,” NORAD.⁴⁰ The Cold-War era pact entered upon was to ensure continental defence of North America. By sheer coincidence (but also representative of the growing relationship between the two North American air forces), the first Commander-in-Chief of NORAD, was General Partridge, the same USAF General that signed the original ASCC partner nations Agreement in 1948 on behalf of the USAF.

With respect to equipment, the acquisition of North American-built defence products was preferred over those produced in the United Kingdom. Equipment

³⁷Patricia A. Weitsman, *Waging War: Alliances, Coalitions and Institutions of Interstate Violence*, (Stanford: Stanford University Press, 2014), 27.

³⁸Goette, *A Snapshot of Early Cold War RCAF Writing...*, 58.

³⁹On the formation of NORAD see 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).

⁴⁰Gary Walsh, “Interoperability of United States and Canadian Armed Forces,” in *Duke Journal of Comparative & International Law*, Vol 15, no.2 (Spring 2005), 316.

manufactured in Canada was easier to acquire and possessed greater commonality with United States products, as most of the Canadian manufacturers were satellite factories of US-based defence companies. The concern was that in future wars, the production capability of UK-based defence industries could be destroyed by a quick enemy attack. The end result was that the United States and Canada drew closer from a bilateral military perspective culminating in the realization of the industrial and economic potential of Canada, with the resultant shift away from Great Britain.⁴¹

In 1950, concerted efforts were made to ensure there was less duplication of activity by the ASCC and better coordination with the ABC Armies organization (similar to the ASCC but relating to American, British and Canadian Armies) and the extant Navy organization. Furthering the goal of cementing relations with other standardization organizations, the air arm of the Navy was also considered in this regard, culminating with the United States Navy (USN) providing a permanent representative to the ASCC by 1951. The Royal Navy (RN) declined an offer to join the ASCC, confident that their relationship with the USN ensured the relay of pertinent information.⁴²

These early years of the ASCC also saw an increasing demand for nations to collaborate on Research & Development activities and test each other's equipment. This led to the creation and signing of the Master Agreement for the Exchange of Equipment for Test Purposes in 1952, a unique feature of the ASCC. The agreement delineated the principles and conditions under which any of the five nations provided equipment for the purposes of testing, including the provision of exchanging technical personnel.⁴³

⁴¹Aronsen, *American National Security and Economic Relations with Canada, 1945-1954...*, 75.

⁴²Air Space Interoperability Council, *ASCC History Outline*, (Washington: 15 Oct 2014), para 9.

⁴³J.V. Radice, *Chronological Summary of Events Concerning ASCC Agreements* (Washington, DC: ASCC/1/1/MC, 30 Sep 1976). Memo on file at Management Committee offices.

For all the great strides that had been taken to secure the partnership between Canada and the United States, that same partnership showed fractures in the otherwise solid foundation of interoperability. As Middlemiss and Stairs observe, given the level of integration that had been achieved in the establishment of NORAD there were “points of friction for Canada.” Since its inception, United States commanders had authority over Canadian NORAD components and the first point of friction came to light during the Cuban Missile Crisis of October 1962. Contrary to Prime Minister John Diefenbaker’s desire to seek a purely diplomatic solution, Canadian Minister of National Defence Douglas Harkness placed Canadian assets that were under NORAD operational control on an extremely high alert status. Considered unnecessary and provocative by the Canadian government, this crisis was an initial test of Canadian sovereignty; however, it highlights the fact that participation in a key interoperability initiative at times entails compromise.⁴⁴ Despite the misgivings experienced by Canada at times and the transition away from dependence on the United Kingdom, the overall benefits were still worth participation in the ASCC. To further strengthen the organization, two additional nations were invited to consider joining the alliance.

Australia & New Zealand Join ASCC

Having closely collaborated in the Second World War in the Pacific, the ANZUS Pact signed in 1951 was a collective security agreement between Australia, New Zealand and the United States. The security pact in fact was actually a bona fide three-way defence pact entered upon to prevent further spread of Communism during the Cold War. In 1962, as an improvement to the ANZUS Pact, the USAF entered negotiations with the RAAF and the RNZAF on the creation of a separate air standardization programme.

⁴⁴Middlemiss and Stairs, *The Canadian Forces and the Doctrine of Interoperability: The Issues...*, 161.

Traditional allies of the United States and member of the Commonwealth, Australia and New Zealand were not party to any standardization body such as NATO and as such did not have official access to NATO Air Standardization Agreements (STANAGS). To mitigate that, Australia and New Zealand were invited to become full members of ASCC in 1963.⁴⁵

Australia joined ASCC effective 8 April 1964 with the appointment of Air Commodore B.A. Eaton, Director General Operational Requirements as the senior RAAF representative. New Zealand soon followed joining ASCC effective 1 April 1965 with the appointment of Air Commodore A.S. Agar, Officer Commanding Operations Group as the senior RNZAF representative. Through full membership to ASCC, the RAAF and the RNZAF were now part of the process that established Air Standards among the five air forces.⁴⁶

ASCC Method of Work and Products

The primary method of fulfilling the ASCC mission was through the promulgation of formal arrangements on standardization. The ASCC Steering Group was responsible for compiling an annual list of prioritized issues and recommending to the National Directors (ND) which Working Party should address the particular issue. Endorsing the recommended way ahead, standardization work undertaken by the Working Parties concentrated on procedures, doctrine and materiel. The recommended solutions provided by the activities of each Working Party were ultimately considered by each nation for endorsement. By addressing these three topics, member nations of the ASCC understood that standardization was not an end in itself, but in fact was a way of

⁴⁵Goldman and Eliason, *The Diffusion of Military Technology and Ideas...*, 102.

⁴⁶ASCC, *Agreement on the Air Standardization Coordinating Committee...*, 1st and 2nd Addenda.

enhancing the operational effectiveness of allied military forces working together.⁴⁷

The three standardization principles adopted by the ASCC were compatibility, interchangeability and commonality. At the low end of standardization, compatibility was achieved when nations operated together using equipment that did not cause unacceptable consequences. This minimal level allowed nations to operate under a specified set of conditions in order to achieve pre-defined requirements. The next level, interchangeability, was straightforward and based on the concept that equipment or processes could be exchanged to meet the same objectives. Although an improvement over compatibility, interchangeability was still less than ideal. The highest and preferred end-state for all nations to achieve, commonality, was defined as “the state achieved when the same doctrine, procedures or equipment are used.”⁴⁸

ASCC Agreements were published under three formats on an increasing scale of importance; Information Publications, Advisory Publications and Air Standards. Additionally, Test Project Agreements were entered upon by at least two of the ASCC nations and indicated formal collaborative research & development initiatives.

Information Publications consisted of information that was of value to the ASCC nations, but did not necessitate promulgation in a formal fashion. Although the document was somewhat informal, the information was protected under the notion of proprietary rights of the authoring nation and was “used for a list of equipment, a list of national procedures, or design characteristics or parameters.”⁴⁹ Advisory Publications were considered to be slightly more formal than an Information Publication, but at the same time did not oblige any of the five nations to commit and “was a vehicle for formally

⁴⁷ASCC, *Air Standardization Coordinating Committee Instructions...*, 1-2.

⁴⁸*Ibid.*

⁴⁹ASCC, *Air Standardization Coordinating Committee Instructions...*, 7D-1.

advising member nations of procedural or materiel developments in situations where standardization is either impossible or inappropriate.”⁵⁰

Air Standards were the primary document produced by the ASCC. The document required the signature of all nations to ratify the publication and it was understood that the document “should meet the objectives of the ASCC; specifically it should directly contribute to operational effectiveness and enhance our ability to operate together.”⁵¹

Although the ASCC experienced initial success, given the nature of its mission and increasing membership, failure plagued the early years.

ASCC Challenges, Successes, and Evolution

The daunting task of achieving unanimous agreement amongst five nations soon became apparent. For example, standardizing military weapons systems was a challenge, underlining the fact that the principle of commonality was considered more important at that time, rather than the concept of improving interoperability using existing equipment. Failure also resulted from the fact that the ASCC construct had expanded to a level that became difficult to manage. Lack of oversight from the Monitoring Committee due to the sheer number of Working Parties combined with the frequency of meetings that were occurring led to very low levels of agreement on standards and thus productivity fell to an unacceptable level.⁵²

Success for ASCC did occur, however, in the area of information exchange. Operational and technical innovations were shared amongst the nations. Information exchange became one of the fundamental activities that provided the greatest benefit to

⁵⁰*Ibid*, 7C-1.

⁵¹*Ibid*, 7B-1.

⁵²Air Standardization Coordinating Committee, *ASCC Working Party Structure Final Report*, (Washington: 12 Nov 1982).

ASCC nations. Success for ASCC was also found as a result of the five nations entering into the “Master Agreement for the Exchange of Equipment for Test Purposes,” the fourth type of agreement that ASCC produced. ASCC nations entered into numerous avionics and armament equipment Test Project Agreements. One such success story was the loan of a triple ejector bomb rack that had been developed in Australia for the F/A-18 and was being tested by the USN. Canada received loan of four prototype racks and succeeded in ensuring compatibility with the forecasted avionics upgrade that was scheduled to occur within Canada’s CF-18 fleet.⁵³

For all the ASCC successes, by the early 1980s the committee was beginning to suffer. Standardization was a wonderful concept in theory, but a formidable foe in practice. The trend towards fewer standards being agreed upon was considered unacceptable given the number of Working Parties in existence. During the 33rd meeting of the ASCC Monitoring Committee, recommendations were approved with a view to taking a fresh look at ASCC. One of the recommendations was possibly lowering the number of current projects being sponsored by ASCC as well as reducing ASCC Working Parties. However, an outside opinion was crucial to ensuring an objective report. In 1982 the RAND Corporation was given the task to evaluate the relevance of the ASCC and submit a report with recommendations on the future of ASCC.⁵⁴

Although a productivity shortfall existed, the RAND study reaffirmed that the ASCC objectives established in 1948 were still relevant in 1982. ASCC was postured for success but required three changes to mitigate waning relevance. First, the Steering Group was now encouraged to take more of a leadership role within the ASCC construct;

⁵³Air Standardization Coordinating Committee, *Test Project Agreement 884-20*, (Washington: 16 April 1989), para 4-6.

⁵⁴Goldman and Eliason, *The Diffusion of Military Technology and Ideas...*, 102.

this led to the formation of the Management Committee (MC). Second, the number of Working Parties was reduced from 23 to 17; an effort to reduce sponsored projects and the increased costs associated with a high number of non-productive work groups. The third change garnered the highest paradigm shift for the ASCC: the goal of achieving textbook standardization (five nations possessing standardized equipment and following standardized doctrine) was partially abandoned. Improvements to interoperability required consideration by ASCC from a multi-domain perspective, comprising combat operations, combat support and ground support; including integration of training, participation in exercises, efficient acquisition and incorporating evolving technologies.⁵⁵

Further evolution occurred not only for the ASCC as it entered the 21st Century, but for the member nation air forces as well. For the RCAF, “an unprecedented number of international interventions increased the tempo of operations resulting in one of the most intensive and challenging periods in Canada’s military history.”⁵⁶ All five nations experienced the same impact on their respective armed forces. The global threat was evolving as was the impact on how nations reacted. The nature of the geographically diverse operations demanded primarily coalition efforts and required that the CAF possess a high degree of expeditionary capability and the highest level of interoperability with key allies.⁵⁷ The number and scope of operations in which the RCAF participated culminated in a high operational pace for practically the entire RCAF fleet. RCAF relevance both at home and abroad was recognized in both routine and contingency

⁵⁵ASCC, *ASCC Working Party Structure Final Report...*,

⁵⁶Department of National Defence, B-GJ-005-000/FP-001, *Canadian Forces Joint Publication 01: Canadian Military Doctrine*, (Ottawa: DND Canada, 2009), 4-1.

⁵⁷*Ibid*, 4-1.

operations.⁵⁸ The relevance of ASCC was at an all-time high demand, yet the committee still required improvements to how it conducted its business if it was to enable improved interoperability.

Rather than motivated to reduce the costs associated with its activities, ASCC regarded increased efficiency and productivity as the preferred objective. The Working Party construct was cumbersome, inefficient and incapable of maintaining pace with rapidly changing technology. Coalition expeditionary operations that most of the five nations were involved with meant that “conducting operations in the current security environment requires flexible, lighter forces that can adapt easily...thus emphasizing the need for as much interoperability as possible.”⁵⁹ This greater need for interoperability, combined with the 2005 ASCC review, resulted in the final ASCC transformation into present-day ASIC. This is the subject of the next chapter.

Conclusion

The close collaboration that Canada and the United States undertook prior to and during the Second World War was drawn even closer following the cessation of hostilities. The advent of the Cold War leading to the requirement for continental defence of North America, combined with a shift towards aligning RCAF doctrine towards the USAF, cemented the bond between the neighboring nations. Defence acquisition of standardized equipment was seen as the future for success of allied operations.

The ASCC originally formed with the mandate to improve standardization amongst the original three nations – Canada, the United Kingdom and the United States.

⁵⁸Rachel L. Heide, “Canadian Air Operations in the New World Order,” in *Air Campaigns in the New World Order*, ed. Allan English, Silver Dart Canadian Aerospace Studies Volume II 77-92, (Winnipeg:, University of Manitoba and the Canadian Forces College, Centre for Defence and Security Studies, 2005).

⁵⁹ASIC, *Capstone Concept Document...*, 1.

In 1964-65, access to NATO standardization documents for Australia and New Zealand was afforded through their membership in the expanded ASCC. Working Parties addressed broad spectrum air force issues and Information Exchange among the nations proved to be of immense value in furthering the ASCC mandate. However, for five nations to agree on any one standard proved to be a daunting task and although the ASCC enjoyed early successes, by the early 1980s it soon became apparent that the ASCC required organizational changes to ensure future viability.

The 1982 RAND Corporation study concluded that the ASCC required substantial organizational changes to mitigate future atrophy. Three changes of import were implemented. The change with the largest impact was the conceptual shift of the ASCC mandate evolving from standardization to that of interoperability between member nations. Operating together successfully through aligned doctrine, shared training and collaborative exercises was considered the future of coalition success. The Air and Space Interoperability Council was thus formed and the next chapter explores the impact of this event.

CHAPTER 3

ASIC STRUCTURE, MISSION AND DELIVERABLES

Introduction

Following the challenges and successes of ASCC as outlined in the previous chapter, the organization was in need of improvement. Faced with too many Working Parties in a structure that was inefficient, studies recommended changes. Although the ASCC ceased to exist in 2005, from its ashes arose ASIC which continues to flourish today.

This chapter examines ASIC structure. It specifically discusses the Management Committee, the Steering Group, how ASIC conducts business and the genesis of strategic direction that ASIC receives through the Annual Task List (the key document that energizes ASIC to achieve its mandate). The importance of Information Exchange for ASIC member nations will also be examined. In addition, the chapter will describe the various ASIC Working Groups that address the full spectrum of air force operations relevant to the RCAF. The chapter will conclude by explaining the influence that ASIC has on member nations' doctrinal development and how ASIC directly influences RCAF activities.

ASIC Structure and Organizations

Along with the name change to ASIC in 2005, the Council underwent significant organizational adjustments. The previous Working Parties that existed under the auspices of the ASCC were dissolved and six warfighting functions Working Groups along with two support function Working Groups were convened. The structure, function and role of the Management Committee in Washington, DC comprising five air force officers from

each of the respective nations remained status quo. The senior leadership and strategic direction was provided by and remained with the National Directors at the general officer level.⁶⁰

The terms of reference for the position of National Program Manager underwent enhancement to facilitate national management within each nation's ASIC activities. This second layer of management at each of the respective nation's air force headquarters was given more responsibility to manage the administration and budget of the respective nation's ASIC activities. The breadth and volume of ASIC related initiatives required national level coordination to ensure that momentum within the nation was maintained. The members of the Management Committee in Washington, DC had previously double hatted themselves in an attempt to coordinate overall ASIC management, as well as coordinate national management for their respective countries. This proved too onerous and was partially responsible for the stagnation of success at ASIC. The improved and expanded National Program Manager terms of reference was a small but crucial step in reinvigorating national efforts to ultimately increase ASIC functional efficiency. Further evolution of the management structure, specifically the creation of the Steering Group created sufficient oversight leading to improved coordination of ASIC priorities and tasks.⁶¹

The ASIC Management Committee consists of five officers at the rank of Lieutenant Colonel (or equivalent) from each of the five nations. Selected for a three year tour, each member of the Management Committee has two distinct roles within the ASIC

⁶⁰Air Standardization Coordinating Committee, *Air Standardization Coordinating Committee Instructions 17th Edition*, (Washington: 2005), 2-2.

⁶¹Air Space Interoperability Council, *ASIC Transformation Report List of Recommendations*, (Washington: 2006), 1-2.

construct. First, as a national representative to the Council, they work for the ASIC secretariat but carry no national executive authority; and second as Chairman of at least one Working Group, they are responsible for the management of its activities. Ordinarily the Management Committee member is assigned additional secretarial duties of at least one of the Working Groups. Two Management Committee members attend each of the Working Group annual meetings, thus ensuring that there is some corporate knowledge continuity between subsequent meetings.⁶²

The Management Committee members represent varied occupations within the air force construct to ensure there is an assortment of experience brought to the task at ASIC. The Management Committee is concerned for much of its time with procedural, administrative and policy matters affecting the overall ASIC. Although the Management Committee has a number of responsibilities, in summary, “as the international secretariat, in conjunction with the Steering Group, the Management Committee manages and administers the ASIC organisation on behalf of the National Directors.” The only ASIC executive group in permanent session, the Management Committee provides ASIC with continuity in all aforementioned matters. In a position to resolve issues within its authority, the Management Committee exists to prepare and present for approval, policy and procedural measures aimed at improving the overall conduct of ASIC business.⁶³

The Naval air components of respective nations are also represented at ASIC through the Management Committee. At the 4th ASCC meeting in April 1950, the Management Committee was directed to submit recommendations to prevent ASCC duplication of standardization efforts with the Army and Navy standardization

⁶²Air Space Interoperability Council, *Governance Document Vol 4: ASIC Instructions Edition 20*, (Washington: Jul 2014 version), 6.

⁶³*Ibid*, 6.

organizations. Air arms of the USN, the RN and the Royal Canadian Navy (RCN) participated in Working Parties and realized the benefits of participation. In the 1960s, the Royal Australian and Royal New Zealand navies were confident that their Air Force representatives at ASCC provided the capability to table any future naval Air arm matters. The RN and RCN concluded that full membership of the USN since 1951 ensured there was a link between the activities of the ASCC and those of the Naval Tripartite Standardization Committee. The present-day ASIC continues with this original structure to address Air arms of extant ASIC nation navies.⁶⁴

Given the amount of correspondence and publications that require management, support staff is crucial to the success of ASIC efforts. The ASIC member nations of Australia, Canada, New Zealand and the United Kingdom agree to equally fund Administrative Assistant support services, while the United States provides office space, equipment, supplies, and Information Technology support, in lieu of financial contributions. The Management Committee is therefore supported by two administrative support staff whose duties include all administration of the ASIC business and maintenance of the ASIC public and private websites.⁶⁵

The Management Committee members and the National Program Managers constitute the Steering Group and function as ASIC oversight throughout the annual work cycle. One important aspect of that oversight function is the selection of prioritized initiatives for ASIC to focus on. The pragmatic view of interoperability is that it sits on a wide spectrum; each nation determines their national priorities and hence where various

⁶⁴Air Standardization Coordinating Committee Management Committee, *Note on ASCC Membership*, Appendix "B" MC/5001/63, (Washington: 7 July 1965).

⁶⁵Air and Space Interoperability Council, *Cost Sharing Agreement*, (Washington: 1 Jun 2012). Note: Four nations contribute \$25,000USD annually and the US provides physical workplace in lieu.

interoperability issues sit along that spectrum.⁶⁶ Individually, ASIC nations table their nation's interoperability priorities that they wish to be addressed as a collective. One can imagine the disparate subjects, capabilities and suggested projects that are brought forth annually. When determining topical priorities to be considered for the annual cycle, the SG faces a daunting task to identify topics that affect the majority of nations and have sufficient national priority.

However, not all nations can be fully standardized with common equipment and therefore must be selective in determining what level of functional interoperability it aspires to achieve for its air force. Harold Skaarup is right in highlighting the fact that the “decision on the level to which the ASCC or individual nations should aspire is based on an assessment of necessity and worth; thus effort and expense is tailored to need.”⁶⁷ The Steering Group is thus responsible to the National Directors to ensure that the priorities that are presented for consideration at the annual National Director Meeting are those which satisfy the quorum of agreed upon subjects. Perhaps easier said than done, however the SG fulfills an extremely vital function that then serves as the catalyst for assigning tasks to the Working Groups (WG).

The advantage to membership in ASIC is that air forces can leverage off of other initiatives within a nation, thus producing a solution to a shared problem while at the same time providing cost savings. Ready and relatively informal access to information and experience comprises great value to ASIC nations. The same access gives nations the ability to markedly reduce the research and development effort required for the

⁶⁶Middlemiss and Stairs, *The Canadian Forces and the Doctrine of Interoperability: The Issues...*, 155. Also refer to Introduction at commencement of paper for further details.

⁶⁷Harold A. Skaarup, *Out of Darkness-Light: A History of Canadian Military Intelligence. Volume 2 1983-1997*, (Lincoln: iUniverse Books, 2005), 114.

introduction of new equipment and techniques of for the maintenance of existing systems.⁶⁸ The RCAF recently tested an alternative fuel that was provided by the USAF for use in RCAF fleets that use the T56 and F404 engines. The test concluded that there is little change in the performance of this fuel when compared to aviation fuel. Since the blended biofuel is less expensive, the RCAF stands to save a substantial amount of fuel costs if it adopts the use of this alternative fuel.⁶⁹ This is an example of the fact that membership in ASIC provides the RCAF with the potential to gain a substantial amount of advantage, whether technological, doctrinal or operational, with a very modest annual investment.

The one constant challenge of any air force is the substantiation of a large budget. Defending one's nation is expensive, and so too is the requirement to fulfill alliance commitments. For military expenditures as a percentage of gross domestic product expenditures, the ASIC nations rank from ninth in the world (United States at 4.35% 2012), twenty eighth (United Kingdom at 2.49% 2012), fiftieth (Australia at 1.71% 2012), eightieth (Canada at 1.24% 2012) to eighty seventh (New Zealand at 1.13% 2012).⁷⁰ Defence spending consumes a considerable amount of the Government of Canada's annual budget and "given the generally shared trend in the Western Alliance of diminished defence budgets...there is the potential for the creation of a substantial capabilities gap between the United States and its allies."⁷¹

The United States is affected less by the shrinking defence spending trend and

⁶⁸M.H. Bond, *An Evaluation of the New Zealand Performance and Future as a Member Nation of the ASCC*, (Washington: No references, 1981), 25-27. Letter on file at ASIC office archives.

⁶⁹Air and Space Interoperability Council, "Project Directives," last modified 3 Mar 2016, accessed 20 Mar 2016, <https://teams.nzdf.mil.nz/sites/asic/projectdirectives/equipcertC130.pdf>

⁷⁰Central Intelligence Agency, "The World Fact Book," accessed 10 Mar 2016, <https://cia.gov/library/publications/the-world-factbook/rankorder/2034rank.html>

⁷¹Goldman and Eliason, *The Diffusion of Military Technology ad Ideas...*, 112.

therefore maintains an upper hand in technological advances within military equipment. Remaining ASIC nations recognize that the United States has undertaken an ambitious program to modernize its armed forces and “that they will be unable to maintain interoperability with the United States in the future.” The concern stems from the viewpoint that restricted resources prevent ASIC nations from advancing along with the United States. Additionally, the same restricted financial constraints reduced national contributions to the innovations of advanced military technologies.⁷²

The resultant capabilities gaps created lead to interoperability gaps for the other ASIC nations. ASIC addresses these interoperability gaps through the Working Groups. When the ASCC evolved into ASIC, the five nations agreed on a basic set of six warfighting functions in the Foundation document. Constructed utilizing a “‘whole of warfighting’ approach to describe military activities that might be undertaken as part of an expeditionary based coalition,” the original six warfighting functional concepts were established from an effects-based strategy.⁷³

The ‘Warfighting Capabilities’ Working Groups address the full spectrum of air force operations; specifically Agile Combat Support, Air Mobility, Command & Control, Intelligence, Surveillance & Reconnaissance (ISR), Force Application and Force Protection. The ‘Support Capabilities’ Working Groups were therefore established to address three enabling capabilities, namely Aerospace Medicine, Fuels & Lubricants and Air Worthiness.⁷⁴ This begs the question: how does ASIC Working Group activity directly benefit and tie into RCAF doctrine?

⁷²*Ibid.*

⁷³ASIC, *Governance Document Vol 3: Operating Concept...*, 4.

⁷⁴ASIC, *Governance Document Vol 3: Operating Concept...*, Annex A, 7. Note: For efficiency, the Command & Control and Intelligence, Surveillance & Reconnaissance functional concepts were combined to form the C2ISR Working Group. The Airworthiness Working Group formed in 2011.

Warfighting Capabilities

The RCAF utilizes six functions in describing how to employ air power; Command, Sense, Act, Shield, Sustain and Generate. Although addressing the full spectrum of air force operations, these six functions have areas of overlap and are not viewed as stand-alone capabilities. The overarching RCAF doctrine manuals that provide guidance for these functions also have areas of overlap.⁷⁵ The six RCAF functions tie directly into the various ASIC Working Groups and there is a direct relationship between the RCAF doctrinal manuals and the efforts of each Working Group, as the following will describe.

The Agile Combat Support Working Group is responsible for capabilities related to establishing, operating and sustaining an airbase, including deploying or recovering coalition air and space forces. The goal of the ACS Working Group is to develop maximum efficiencies for the provision of aircraft maintenance, engineering, logistics, airfield services and personnel. Doctrinal information exchange and published standards for procedures, equipment and training are the main products of this Working Group.⁷⁶

The efforts of the Agile Combat Support Working Group align directly with RCAF doctrine. *B-GA-406-000/FP-001, Canadian Forces Aerospace: Sustain Doctrine* describes the RCAF capabilities required to “sustain a main operating base or deployed operating base.”⁷⁷ Agile Combat Support Working Group efforts and RCAF doctrine are closely aligned in four capabilities critical to sustaining aerospace power: personnel,

⁷⁵Department of National Defence, B-GA-400-000/FP-000, *Canadian Armed Forces Air Doctrine* (Draft), (Ottawa: DND Canada, 2015), 25.

⁷⁶ASIC, *Governance Document Vol 3: Operating Concept...*, Annex A, 8.

⁷⁷Department of National Defence, B-GA-406-000/FP-001, *Canadian Forces Aerospace: Sustain Doctrine*, (Ottawa: DND Canada, 2014), iii.

materiel, infrastructure and services.⁷⁸ RCAF participation in ASIC thereby addresses these potential interoperability gaps.

The Air Mobility Working Group is responsible for capabilities related to the movement of personnel, materiel and forces by air into and within theatre. Airlift is the main focus of effort as is air-to-air refueling, special operations support and aeromedical evacuation. The Air Mobility Working Group mandate works to increase coalition flexibility by improving personnel and equipment interoperability, thus contributing to mission success. This is accomplished by maintaining a high level of information and publications on doctrine, procedures and training Air Standards.⁷⁹

The work of the Air Mobility Working Group aligns with RCAF Doctrine, *B-GA-404-000/FP-001, Canadian Forces Aerospace: Move Doctrine*. This document describes numerous capabilities required to ensure the RCAF is “providing rapid and precise positioning of personnel and materiel over potentially great distances.”⁸⁰ The Air Mobility Working Group and the RCAF find synergy in airlift and air-to-air refuelling. RCAF gaps are thereby mitigated by participation in ASIC as all five nations operate similar fleets capable of airlift and refuelling.⁸¹

The ISR Working Group is responsible for capabilities related to collecting, processing, exploiting and disseminating accurate, timely and relevant information thus providing the battlespace awareness essential for the commander’s timely decisions.

Successful planning and conduct of operations relies on air and space assets providing

⁷⁸The author is interpreting that when compared, RCAF Sustain doctrine and the ACS Working Group Terms of Reference are closely aligned.

⁷⁹ASIC, *Governance Document Vol 3: Operating Concept...*, Annex A, 12-14.

⁸⁰Department of National Defence, B-GA-404-000/FP-001, *Canadian Forces Aerospace: Move Doctrine*, (Ottawa: DND Canada, 2012), iv.

⁸¹All 5 ASIC nations operate Hercules airlift fleets. RAAF, RCAF, RAF and USAF operate Globemaster airlift fleets. For air-to-air refuelling aircraft, the RAAF operate Airbus 330, the RCAF operate Airbus 310 and Hercules H-models and the USAF operate several (author’s knowledge), but all are interoperable.

ISR. This Working Group focuses on increasing the flexibility, effectiveness, and responsiveness of coalition forces by reducing uncertainties in the decision-making process. Compatible doctrine, common procedures, education, training and exercising, are all essential enablers for this interoperability.⁸²

The ISR Working Group ties into RCAF doctrine through *B-GA-402-000/FP-001, Canadian Forces Aerospace: Sense Doctrine*. The RCAF has proven to be of value when providing intelligence products to coalition partners in a deployed environment (see chapter 4). This can be attributed to the fact that RCAF participation in ASIC has ensured that doctrinal decisions affecting ISR policies and procedures have either been initiated by Canada or influenced by Canada's presence at annual meeting discussions.⁸³

The Force Application Working Group is responsible for capabilities related to employing kinetic and non-kinetic means creating lethal and non-lethal effects. The Working Group focuses on interoperable doctrine, tactics, techniques and procedures, as well as the Command & Control function. This work is achieved through extensive Information Exchange between the ASIC nations as well as promulgation of appropriate interoperable equipment standards.⁸⁴

RCAF doctrine addressing the application of force is captured in *B-GA-403-000/FP-001, Canadian Forces Aerospace: Shape Doctrine*. Two key concepts to force application for the RCAF are having “a robust, agile, flexible and interoperable force”

⁸²ASIC, *Governance Document Vol 3: Operating Concept...*, Annex A, 18-19.

⁸³Department of National Defence, B-GA-402-000/FP-001, *Canadian Forces Aerospace: Sense Doctrine*, (Ottawa: DND, 2012), 43.

⁸⁴ASIC, *Governance Document Vol 3: Operating Concept...*, Annex A, 21. The Force Application Working Group conducts business at a classification level that restricts the level of detail in describing the mandate and spectrum of topics addressed.

and a “dynamic aerospace C2 [command and control] capability.”⁸⁵ The RCAF possesses both of these capabilities; and participation at ASIC has proven to be of value for Canada. As will be discussed in Chapter 4, this has resulted in the fact that the RCAF clearly can develop, lead and control combat missions in a coalition context.

The Force Protection Working Group is responsible for the preservation of expeditionary forces and minimizing the vulnerability of facilities or materiel. Operations and activities that are jeopardized by threats and hazards hinder mission success. Sharing a common threat assessment overview and possessing doctrinally compatible forces, combined with a unified understanding of Force Protection measures and means, increases the interoperability of coalition operations. This is achieved through the promulgation of numerous standards and focusing on future technologies thereby anticipating potential interoperability gaps.⁸⁶

Force Protection is a fundamental capability and the RCAF provides guidance for consideration of topics such as airfield security in *B-GA-405-000/FP-001, Canadian Forces Aerospace: Shield Doctrine*. Possessing the capability to protect deployed forces affords the Commander “conditions that enhances operational effectiveness and military efficiency, while maintaining the safety” of all personnel.⁸⁷ Canada actively participates in ASIC at the Force Protection Working Group; providing subject matter expertise on Chemical, Biological, Radiological and Nuclear (CBRN) defence and security expertise in Force Protection thereby mitigating actual gaps or reducing the potential for future interoperability gaps.

⁸⁵Department of National Defence, B-GA-403-000/FP-001, *Canadian Forces Aerospace: Shape Doctrine*, (Ottawa: DND, 2014), iv-v.

⁸⁶ASIC, *Governance Document Vol 3: Operating Concept...*, Annex A, 23.

⁸⁷Department of National Defence, B-GA-405-000/FP-001, *Canadian Forces Aerospace: Shield Doctrine*, (Ottawa: DND, 2012), 2.

Supporting Capabilities

The Aerospace Medicine Working Group is responsible for all matters related to aviation medicine such as the physical effects of altitude on aircrew and aircrew exposure to the air & space environment. The Working Group comprises national representatives of the Surgeon General. Recent efforts have resulted in improved coalition interoperability in the aeromedical evacuation of extremely contagious patients. Although the Air Mobility Working Group is responsible for the interoperability of aeromedical aircraft and equipment, this Working Group establishes common procedures and doctrine for the preparation and transport of patients.⁸⁸

The Fuels Working Group is responsible for holding extremely high standards related to aviation fuels, oils, lubricants and gasses. Quality assurance of these fluids is paramount to ensure safe and effective air force flying operations. These standards have far reaching implications when operating in a coalition environment, thus mutually established quality standards and guidelines ensure safer interoperability. Establishing common testing procedures as well as ensuring that civilian providers are held to the same military standards are part of the mandate. A comprehensive database of publications to ensure those high standards is maintained amongst ASIC nations.⁸⁹

The Airworthiness Working Group is responsible for providing high level management oversight of airworthiness of ASIC aircraft. Members of the Working Group are executive level military airworthiness authority representatives, thereby facilitating discussions leading to the recognition and utilization of other ASIC member nations’

⁸⁸Air and Space Interoperability Council, “AW Documents,” accessed 2 Mar 2016, <https://teams.nzdf.mil.nz/sites/asic/documents/airworthiness>

⁸⁹Air and Space Interoperability Council, “Fuels Documents,” accessed 5 Mar 2016, <https://teams.nzdf.mil.nz/sites/asic/documents/fuels>

regulatory systems and airworthiness management frameworks. This leads to allowing maintenance, operation and support of each other nation’s aircraft to an acceptable level of safety.⁹⁰

Aerospace Medicine, Airworthiness and Fuels are subjects that can be found in RCAF Sustain and Move doctrine. RCAF participation in these three support capabilities WGs can provide similar value to the development of RCAF doctrine. The following table depicts the relationship between RCAF doctrine and the ASIC Working Groups, demonstrating that the full spectrum of potential interoperability gaps is addressed. As will be discussed in the next section, the Working Groups receive their annual strategic direction from the National Directors.

	COMMAND	MOVE	SHAPE	SENSE	SHIELD	SUSTAIN
AGILE COMBAT SUPPORT		✓	✓	✓	✓	✓
AIR MOBILITY	✓	✓	✓			✓
FORCE APPLICATION	✓		✓	✓	✓	
INTELLIGENCE SURVEILLANCE	✓		✓	✓		
AIR WORTHINESS		✓			✓	✓
AEROSPACE MEDICINE						✓
FUELS		✓			✓	✓

Table 1.1 Depiction of ASIC Working Groups and RCAF Doctrine relationships. Source from author.

⁹⁰Air and Space Interoperability Council, “ASIC”, Accessed 8 Mar 2016, <https://teams.nzdf.mil.nz/sites/asic>

Strategic Direction and the ASIC Task List

The National Director position has a two-fold function, one at the ASIC level and the second, at their respective nation's level. Individually, the National Director is responsible for liaising with their air force chief of each respective nation, and other national interoperability organizations, to ensure that their air force interoperability gap priorities are addressed at ASIC. As a collective, the National Directors devise ASIC policy and through the promulgation of the annual Task List ensure that annual ASIC activities are in direct support of the ASIC mandate.

Strategic direction for ASIC is determined by the National Directors and is considered as the Commander's intent for the Council. Development of the annual strategic direction is an iterative process involving the Management Committee and National Program Manager level (acting together as the Steering Group), thus ensuring that prioritized initiatives are considered "to be consistent with national approaches to air and space interoperability."⁹¹ The interrelation between the top down guidance provided by the National Directors, the bottom up recommendations from the Working Groups as well as the influence of other sources of strategic guidance is depicted on the following page. Figure 1.1 shows ASIC has a two-way, top down and bottom up approach to formulating the annual work plan, welcoming input from the Working Group and other Project Groups. ASIC relies on collaboration with other multinational interoperability organizations to ensure that the topical work for ASIC is not duplicated elsewhere.

⁹¹Air Space Interoperability Council, *Governance Document Vol 1: Strategic Direction*, (Washington: Jul 2014 version), 2.

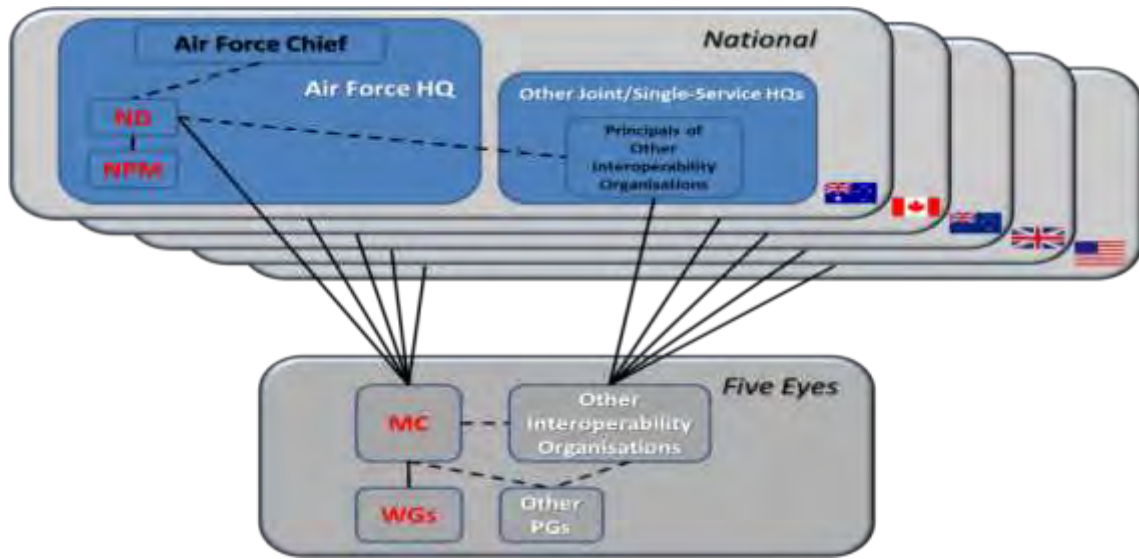


Figure 1.1 - ASIC Governance and Influence
 Source: ASIC, *Governance Document Vol 1: Strategic Direction*, 5.

At the national level, the National Director is the senior air force officer responsible for providing the national position on any Working Group activities. ASIC nations have historically struggled with the selection of the National Director position.⁹² To remain relevant at the ASIC table, it is imperative that the National Director be selected from a position to speak with authority on national air force interoperability gap priorities. The National Director is also responsible for assigning the appropriate personnel to the Working Groups; as with most nations, the personnel assigned to Working Groups are taking on additional responsibilities with ASIC and therefore require support from the chain of command to ensure their workload allows for additional tasks and travel. The National Director oversees all national ASIC activities and provides direction to all of the national Working Group senior representatives during the annual Heads of Delegation meetings that occur within each of the respective ASIC nations.⁹³

The present day structure of ASIC reflects the successful efforts that each nation

⁹²WG CDR Dave Brensell, RNZAF ASIC MC Member, conversation with author 8 Jan 2016.

⁹³ASIC, *Governance Document Vol 4: ASIC Instructions Edition 20...*, 4.

has undertaken to ensure the correct National Director was selected as national ASIC representatives. Figure 1.2 depicts the evolved management structure within ASIC.



Figure 1.2 - ASIC Management Level Organization
Source: ASIC, *Governance Document Vol 4: ASIC Instructions Edition 20, 4*.

The annual National Director Meeting provides the opportunity for a two day conference facilitating face-to-face meetings of the National Directors and the Steering Group to provide the strategic direction. The most productive aspect of the conference is the opportunity for senior air force leadership to engage in the Information Exchange process. The general officers discuss mutual challenges and interoperability gaps that plague their nation's air forces. The Steering Group contributes to the validation of ASIC existence through their annual report of Working Group successes, projects and ongoing challenges. A review of newly promulgated Air Standards is presented to the National Directors which assists in justifying the national investment in ASIC activities.⁹⁴

One of the outcomes of this conference is the ASIC National Directors Task List,

⁹⁴*Ibid*, 33.

which provides the annual strategic direction. As one ASIC governance document notes, “the Task List emphasizes a broad spectrum of operational and material issues that ensures the ASIC output continues to enhance the ability of the member air forces to operate together.”⁹⁵ The list is provided to the Steering Group who determines which Working Group is best assigned each task. The genesis of the Task List is a top-down, bottom-up systematic approach wherein the Steering Group provides recommendations to the National Directors as to what prioritized gaps need to be addressed.

The National Directors liaise not only with their air force chiefs, but with other multi-fora communities, which provide them with further input on emerging air force interoperability gaps. Although a formal process, “there remains the opportunity for short notice projects that arise from an important interoperability issue such as safety related lessons from theatre.”⁹⁶ This allows the National Directors to react rapidly with the Management Committee, via Video Teleconference, to assign further tasks. The Task List is a pivotal, living document that provides ASIC strategic guidance of an overarching nature to achieve the interoperability required for aerospace coalition expeditionary operations.⁹⁷

Information Exchange

Benefitting all ASIC nations is the Information Exchange Program. Formal Information Exchange constitutes an agreement between ASIC nations in pursuit of a well-defined end state, in the form of Projects which “need to have a strong linkage between the information exchanged and how it relates to future ASIC interoperability

⁹⁵*Ibid.*, 26.

⁹⁶*Ibid.*

⁹⁷Air Space Interoperability Council, *Task List 2015*, (Washington: Jun 2015 Version 1), 2.

issues.”⁹⁸ Standing Information Exchange occurs during Working Group meetings and allows for the exchange of national information that may be pertinent to share or it may involve industry or agency representatives presenting a brief that pertains to some element of interoperability. Informal Information Exchange consists of the daily interaction of the ASIC Management Committee staff in Washington, DC as well as any requests for information that arrive at the Management Committee level. Information Exchanges remain a useful product as they “form a vital part in the sharing of important information between the member nations.”⁹⁹

For Canada to successfully conduct joint and combined operations, there are four key elements to interoperability that need to be considered: technical, training, doctrinal, and procedural.¹⁰⁰ A diminished capability in any one of these four elements can lead to an interoperability gap in the successful conduct of coalition operations. Interoperability gaps are identified and reported to ASIC through Lessons Learned from each nation’s air forces, observations made during joint exercises, and formal, standing or informal Information Exchanges. ASIC identifies and prioritizes interoperability gaps that exist in any of the four elements.

The RCAF directly benefits from ASIC through the harmonization of doctrine. A recent example of this can be found in ASIC Project 13A, Aeromedical Evacuation (AE) Equipment Certification and Approval for C130. The ability of ASIC nations to carry AE equipment on board a C130 in the tactical environment (interoperability) is currently degraded due to the current level of cross-certification of AE equipment. The project will address all four key elements of the potential interoperability gap by

⁹⁸*Ibid.*, 31.

⁹⁹ASIC, *Governance Document Vol 4: ASIC Instructions Edition 20...*, 28.

¹⁰⁰DND, *Canadian Forces Joint Publication 01: Canadian Military Doctrine...*, 6-5.

consolidating the current doctrinal practices and ensuring AE equipment is certified through the publication of an Air Standard for ASIC nations to follow.¹⁰¹

Close collaboration with the scientific community in Canada provides the RCAF with extensive research and development potential. As the Defence Research Development Canada (DRDC) report *Looking Forward, Staying Ahead: Enabling Transformation* observes, “to ensure interoperability with allies, such as the United States, the CF of the future must embrace technology-driven warfare.” The initiatives are shared with ASIC nations, on a reciprocal basis, providing an additional avenue for the exchange of information leading to cost savings for the RCAF.¹⁰² Information exchange is not only important as a means for ASIC nations to collaborate and tackle common challenges, but has a more profound effect on national doctrine development.

Defence Policy and Doctrine

Defence policy is derived from Government of Canada defence priorities communicated to the CAF through Capstone documentation. To align with this policy, RCAF doctrine is guided by B-GA-400-000/FP-000 *CAF Air Doctrine*.¹⁰³ Through doctrine development, the RCAF defines its role within the Government of Canada security construct. As Chapter 2 demonstrated, the role of the RCAF evolved following extensive allied involvement throughout the Second World War and the beginning of the Cold War, leading to the need for the defence of North America. The inevitability of collaborating with the United States for continental defence came to the forefront following the Second World War.

¹⁰¹Air and Space Interoperability Council, “Project Directives,” accessed 20 Mar 2016, <https://teams.nzdf.mil.nz/sites/asic/projectdirectives/equipcertC130.pdf>

¹⁰²Department of National Defence, *Looking Forward Staying Ahead: Enabling Transformation*, (Ottawa: DND Canada, 2004), 5.

¹⁰³DND, *Canadian Armed Forces Air Doctrine*. (Draft)..., 1-4.

As Canada's defence situation evolved, so too did a debate about maintaining Canadian sovereignty whilst cooperating with other countries. Donald Creighton posits that with the Ogdensburg Agreement of 1940 the first step was taken down the slippery slope which essentially bound Canada to a continental defence system and determined Canadian defence policy for the next thirty years. Creighton refers to the fact that the 1940 Agreement acted as the catalyst for future defensive agreements between Canada and United States and that this had a profound effect on Canada's independence to determine its own defence policies into the future.¹⁰⁴

There is a close correlation between air power theory, defence policy and air force doctrine. Aaron Jackson writes that air power theory is traditionally what has guided the RCAF for many decades and in the past was considered the unofficial direction for air force leaders; providing the "how, what and why" an air force does. *Air Force Vectors* delineates RCAF direction and describes the vision of the RCAF Commander, of an "agile and integrated Air Force with the reach and power essential for CAF operations."¹⁰⁵ Doctrine however is a more formalized collection of parameters guiding the future path down which the air force must follow. Jackson discusses that doctrine is the institutional framework upon which the RCAF ensures a unity of purpose is achieved.¹⁰⁶ To simplify, it is perhaps easier to understand the two concepts by considering that air power theory is entirely subjective whereas doctrine is completely objective and the two are used in conjunction to achieve the vision.

Regardless of the definitions, doctrine is determined to set the way ahead for the

¹⁰⁴Donald Creighton, *The Forked Road: Canada 1939-1957*, (Toronto: McClelland & Stewart, 1976), 43.

¹⁰⁵Department of National Defence, A-GA-007-000/AF-008, *Air Force Vectors: Agile, Integrated, Reach, Power*, (Ottawa: DND Canada, 2014), 33.

¹⁰⁶Aaron P. Jackson, "The Emergence of Doctrinal Culture Within the Canadian Air Force," *The Canadian Air Force Journal* Vol 2, no. 3 (Summer 2009): 40-41.

RCAF. The net result of the ASIC national participation is the potential to influence the direction that a particular nation may follow with respect to development of their national air force doctrine.

Published by DND, *Future Security Environment 2013-2040* makes a clear statement on the importance of Canada's engagement with its ASIC partners.

Specifically, it states that "although the likelihood of the CAF operating alongside non-traditional partners may be strong...it will likely remain militarily more closely aligned to the US and the UK in the first instance, and the remainder of the 'Five Eyes'."¹⁰⁷ ASIC's five nations have enjoyed historical ties stemming from collaboration during the Second World War. Canada and the United States enjoy a geographical advantage that facilitates multi-fores membership with Pacific and Atlantic nations.

As a member of NATO, Canada and the CAF can actively participate in the development of NATO doctrine.¹⁰⁸ Since Canada and the United States are both members of NATO, collaboration on development of national doctrine ensures that each respective nation's doctrine is consistent at the NATO level. The unique nature of the "Five Eyes" ASIC construct provides a conduit through which NATO information is shared with Australia and New Zealand. ASIC provides a unique opportunity for Canada, the United Kingdom and the United States to share information with two important nations that otherwise could not contribute to improved air force interoperability.

National Security and National Defence policies are promulgated by the Government of Canada. These policies outline the priorities that are to be undertaken to maintain domestic security, protect Canadian sovereignty and participate in international

¹⁰⁷Department of National Defence, *The Future Security Environment 2013-2040*, (Ottawa: DND Canada, 2014), 87.

¹⁰⁸DND, *Canadian Forces Joint Publication 01: Canadian Military Doctrine...*, 1-4.

coalition initiatives. As explained on the DND public website, the Canadian Armed Forces and the Department of National Defence “provide advice and support to the Minister of National Defence and implement decisions regarding the defence of Canadian interests at home and abroad.” The Minister of National Defence provides direction for the CAF through the Chief of Defence Staff, who in turn is responsible for implementation of that governmental direction. Implementing those decisions and interpreting courses of action are facilitated through the development of CAF doctrine.¹⁰⁹ In order to increase the efficiency and efficacy of the RCAF, the closer aligned its doctrine is with Canada’s allies, the better Canada’s air power institution will be able to operate, not only in domestic operations but in a coalition environment.

The 2008 Canada First Defence Strategy (CFDS) aimed at improving the overall effectiveness of the CAF, while improving Canada’s capacity to enforce its sovereignty. Resulting from a two year study, the CFDS set the course for the CAF for the next twenty years. The Government of Canada was underlining the importance that “in concert with its allies, Canada must be prepared to act and provide appropriate resources in support of national interests and international objectives.”¹¹⁰

The newly elected Liberal government states that the CFDS is outdated and has committed to “an open and transparent review” of the current defence capabilities and to developing “an agile, responsive and well-equipped” CAF while maintaining NORAD commitments, NATO security contributions and domestic sovereignty as a priority.¹¹¹

¹⁰⁹Department of National Defence, “National Defence and the Canadian Armed Forces,” last modified Feb 2016, accessed 3 Feb 2016, <http://www.canada.ca/en/department-national-defence.html>

¹¹⁰Department of National Defence, *Canada First Defence Strategy*, (Ottawa: DND Canada, 2008), 9.

¹¹¹Liberal Party of Canada, “Strategic Priorities”, accessed 21 April 2016, <https://www.liberal.ca/realchange/strategic-priorities/>

Collaboration, cooperation and consultation with other “Five Eyes” nations in developing similar doctrine remains the most efficient method to mitigate any interoperability gaps that could arise during future coalition operations. Canada shares similar force structures with the other ASIC nations, with the exception of the US Department of Defense. That fact has a far reaching effect on the CAF and its doctrinal development. The strong possibility of participating in coalition operations alongside an ASIC ally directly influences CAF doctrine; as the DND website explains, “Canada is an active participant in doctrine development with the armed forces of the United States (US), the United Kingdom (UK), Australia (AUS) and New Zealand (NZ).”¹¹²

Canada finds itself in a unique situation in that participation in NATO contributes to the security of European nations; participation in NORAD contributes to the security of North America and finally, participation in “Five Eyes” fora such as ASIC, contributes to the security of Pacific nations. Through participation in these constructs, Canada can influence and direct the defence doctrine of participant nations. Mitigating interoperability gaps is facilitated through close alignment of Canadian doctrine with the remaining ASIC nations’ doctrine. Canada’s participation in ASIC contributes to closing potential interoperability gaps. For the RCAF, Canada’s membership in ASIC allows for the logical combination of NATO doctrine and the doctrine developed by ASIC nations. Thus, the overarching caveat in the development of CF doctrine is to ensure that CAF doctrine is compatible with the joint and combined doctrine of NATO and the “Five Eyes” community.

RCAF and ASIC

As Air Force Vectors, the RCAF’s strategic vision document notes, “the RCAF

¹¹²DND, *Canadian Forces Joint Publication 01: Canadian Military Doctrine...*, 1-4.

will provide the CAF with relevant, responsive and effective airpower to meet the defence challenges of today and into the future.”¹¹³ This statement is the fundamental concept that is the catalyst for all RCAF doctrine, personnel training, acquisition, infrastructure and exercise planning activities. The CFDS provided the overarching plan for the RCAF as it “helped identify where investments were most needed in order to fill gaps across the four pillars upon which military capabilities are built – personnel, equipment, readiness and infrastructure.”¹¹⁴ As mentioned earlier, the Liberal government under Prime Minister Trudeau has recently committed to developing a better-equipped CAF. The document *Real Change* emphasizes equipping the CAF and maintaining NORAD, NATO and domestic sovereignty commitments.¹¹⁵

The Second World War tested Allied interoperability, providing numerous valuable lessons that were incorporated into air force doctrine during and following the war. Cooling and Hixson observe that during the Second World War, when allied units began to integrate with one another there was a time period during that integration “when amalgamation of allied units/elements will begin to exercise a degrading influence on the offensive capability of the force as a whole.”¹¹⁶ This was due to the lack of developed cohesive doctrine to prepare the force to integrate in a more effective manner.

At the onset of the Cold War, the RCAF faced yet another test. In the initial years of the Cold War, the RCAF deployed thousands of personnel and aircraft to numerous bases throughout Europe under the auspices of NATO support. Doctrinal changes were

¹¹³DND, *Air Force Vectors: Agile, Integrated, Reach, Power...*, 26

¹¹⁴DND, *Canada First Defence Strategy...*, 9.

¹¹⁵Liberal Party of Canada, “A New Plan to Strengthen the Economy and Create Jobs With Navy Investment”, accessed 20 April 2016, <https://www.liberal.ca/a-new-plan-to-strengthen-the-economy-and-create-jobs.pdf>

¹¹⁶Cooling and Hixson, *Lessons of Allied Interoperability: A Portent For The Future...*, 3.

rapid and the RCAF had to embrace them due to the fact that “incompatible forces, or those that were non-interoperable, became less relevant as doctrine and strategy evolved.”¹¹⁷ The RCAF profited from the expertise provided by the RAF and the USAF who were also heavily involved in continental European defence; thus enhancing RCAF capability and interoperability. The RCAF presence and success in Europe during the Cold War “had successfully promoted the notion of air power as a fundamental element of national power.”¹¹⁸ Building upon that vast depth of experience from the Second World War through the Cold War to the 21st Century, the RCAF continues to execute its mission with consistency, accuracy and relevance.

The RCAF exists primarily to provide air power effects to the Government of Canada and therefore RCAF doctrine is developed to support that primary role. In the 21st Century, the RCAF is even more relevant to Canada’s national power and sovereignty. For example, given the nature of modern conflict and asymmetric threat that dominates the globe, Canada’s Armed Forces must be capable of reacting extremely rapidly and possess the capability to rapidly deploy globally. The RCAF can provide that capability. To enable successful completion of that mission, interoperability and standardization are at the core of the RCAF doctrine. *Air Force Vectors* states that the “Air Force will also engage with other air forces to ensure common standards, to exchange lessons, and to grow an understanding of airpower expertise.”¹¹⁹ Although ASIC does not focus on either the formal development of doctrine or air power expertise, it exerts an influence nonetheless on other countries with respect to their air force doctrinal vectors. Current

¹¹⁷Dean C. Black, “Canada’s Army Loses its Air Force,” *Sic Itur Ad Astra: Canadian Aerospace Power Studies, Big Sky Little Air Force Vol II* (2009): 102.

¹¹⁸Randall Wakelam, *Cold War Fighters: Canadian Aircraft Procurement, 1945-54* (Vancouver, University of British Columbia Press, 2011), 51.

¹¹⁹DND, *Air Force Vectors: Agile, Integrated, Reach, Power...*, 37.

direction dictates that the RCAF engages with other organizations and air forces in a systematic manner and should consider common hemispheric defence challenges.¹²⁰

The RCAF approaches doctrine development in a building block approach. The first step ensures that the RCAF is doctrine is postured to enhance internal interoperability.¹²¹ The second step broadens the scope to ensure that the RCAF can operate within the other two environments of the CAF and allied forces.¹²² The recently released draft version of the CAF Air Doctrine emphasizes this exact point; that a balance must be struck between the achievement of joint interoperability (operations within the CAF from two or more environments) and combined interoperability (operations with one or more coalition nations).¹²³ ASIC provides exactly that opportunity, assuring the RCAF is forging ahead in the proper direction in collaboration with its allies.

The work of ASIC directly contributes to enhancing RCAF interoperability not only through the production of air standards, but through the interaction and influence that ASIC executes with other Washington DC-based multi-fora groups. The army equivalent to ASIC is the American British Canadian Australian and New Zealand Armies' Program (ABCA). ABCA evolved from a shared desire to forge standardization between Canada, the United Kingdom and the United States and from an effort to focus on improving interoperability.¹²⁴ In addition to addressing potential interoperability gaps with the army, ASIC liaises with AUSCANZUKUS, the navy five eyes organization.

Assisting in addressing the potential technical interoperability gaps, ASIC liaises

¹²⁰*Ibid.*

¹²¹*Ibid*, 37.

¹²²Department of National Defence, *Canadian Forces Integrated Operating Concept Draft Version 01*, (Ottawa: DND Canada, 2005), 12.

¹²³DND, *Canadian Armed Forces Air Doctrine* (Draft)..., 1-4.

¹²⁴American, British, Canadian, Australian and New Zealand Armies (ABCA), "History," last modified 2016, accessed 7 Jan 2016, <http://www.abca-armies.org/History.aspx>

closely with The Technical Cooperation Program. This collective science and technology international organization contributes to the success of RCAF interoperability. As *Science and Technology in Action, Delivering Results for Canada's Defence and Security* summarizes, that allied and robust science and technology is paramount to successfully lowering the costs involved in improved technological interoperability.¹²⁵

The importance of Government of Canada participation in ASIC is noted in CAF capstone joint doctrine, “to facilitate interoperability, CF strategic, operational and tactical doctrine must be consistent with the doctrine of our principal allies and alliances.”¹²⁶ The four other ASIC nations share that same common goal of doctrinal alignment. Australia, New Zealand, the United Kingdom and the United States have similar vested interests in the success and outcome of ASIC interactions. As one piece in the USAF's *Air and Space Power Journal* notes, “both the United States and the United Kingdom are extremely active in standardization with other allies...in order to achieve the highest cooperation among their militaries.”¹²⁷ To a lesser extent, Australian and New Zealand participation in ASIC is important to ensure cooperation amongst allies, in the event that they are involved in future NATO or coalition operations with Canada, the United Kingdom or the United States. The advantage to their membership lies in the ability to maintain access to the greater amount of NATO doctrine and standardization information, some of which is either very similar or identical to ASIC publications.¹²⁸

Conclusion

¹²⁵Department of National Defence, *Science and Technology in Action, Delivering Results for Canada's Defence and Security*, (Ottawa: DND Canada, 2013), 9.

¹²⁶DND, *Canadian Forces Joint Publication 01: Canadian Military Doctrine...*, 1-4.

¹²⁷Malcolm Grimes and Donald Ferguson, “Doctrine NOTAM: Joint Publication 3-16,” *Air & Space Power Journal* XVIII, no.4 (Winter 2004), 73.

¹²⁸ASIC, *Governance Document Vol 4: ASIC Instructions Edition 20...*, 38.

ASIC has incorporated structural changes to improve productivity and enhance efficiency. The mandate of the evolved ASIC remains focused on improved coalition warfighting capabilities through air and space interoperability.¹²⁹ The organizational changes incorporated up to now have resulted in a more streamlined process that is less likely to suffer the repeated history of the ASCC construct in the past. ASIC comprises fewer Working Groups, allowing for a detailed examination of interoperability gaps that remain at the forefront of each ASIC nation.

RCAF doctrine aims to have a highly trained, capable and interoperable air force; and ensuring the development of interoperable doctrine is aided by Canada's participation in ASIC. The RCAF is a well-respected air force but it does have capability deficiencies. In the event of coalition operations, capabilities lacking within the RCAF are sought through forged and historical alliances. ASIC remains at the forefront as an available and invaluable resource that enables RCAF doctrinal alignment with its allies.

The five nations that comprise ASIC are inextricably linked either through a rich air force history, an inevitable geography or a shared appreciation of democracy. Membership in ASIC allows each nation to build upon that rich history, eventually contributing to a stronger air force link. To that end, the next chapter will examine the shared vision of nations with membership in ASIC, the costs involved and the effect on sovereignty.

¹²⁹ ASIC, *Capstone Concept Document...*, 1.

CHAPTER 4

ASIC BENEFITS, CHALLENGES AND THE ISSUE OF SOVEREIGNTY

Introduction

ASIC has survived numerous iterations of evolution over the past 68 years but one fact that remains consistent is that the benefits to member nations outweigh the challenges. The previous chapter examined the ASIC structure, organization, conduct of business, the manner in which ASIC receives strategic direction and the importance of Information Exchange. To underline that interoperability improvements are not just air force centric, the interaction that ASIC forges with other multi-fora organizations was reviewed and the chapter concluded with a discussion of the interrelation between ASIC nations and RCAF doctrine.

This chapter discusses the benefits to the RCAF through membership in ASIC and examines the other participant nations' ASIC experiences, highlighting stressors and successes. The costs involved with RCAF participation in ASIC, an examination of events that have validated RCAF ASIC membership and a discussion of how RCAF interoperability is enhanced will be discussed. Lastly, the central argument that Canadian sovereignty is not negatively affected through participation in multi-national organizations will be examined.

RCAF Benefit

The RCAF mission is to provide the Government of Canada with aerospace power that is relevant, responsive and effective. *Canadian Forces Aerospace Shape Doctrine* underlines one of the fundamental criteria upon which RCAF doctrine is based: "Canada's commitment to domestic and international security and defence demands a

robust, agile, flexible, and interoperable force equipped to deliver kinetic and non-kinetic aerospace power.”¹³⁰ Interoperability gaps will always exist within air forces; determining which gaps to close is the challenge facing the senior leadership. For Canada, one of the strategies providing a conduit through which to mitigate interoperability gaps is membership in ASIC.

Potential RCAF interoperability gaps are addressed at ASIC and cover the full spectrum of ASIC-related functional concepts. There are five factors to consider that can have a far reaching effect on interoperability for the RCAF. The method through which the RCAF acquire new capabilities; the effects of a shrinking defence budget; the rapidly changing military technology; the changing nature of global operations; and the advent of refined multinational collaboration are all factors that warrant discussion.

The RCAF mission demands relevant, responsive and effective aerospace power. Relevant concerns maintaining a high level of interoperability with allies and other government agencies; responsive is ensuring a high level of deployed capability; and effective entails a high level of joint capability. *Air Force Vectors* reflects this in describing the strategic objective of Vector 2 – Integrated, where it describes that the RCAF “engage with other airpower practitioners” thus enabling the RCAF to “maintain and advance interoperability.”¹³¹ Enabling the RCAF to deliver this mission requires that it possess the most up-to-date technologically advanced platforms that are capable of deploying worldwide and remaining interoperable with all allies; while at the same time, remaining immune to shrinking acquisition budgets.¹³² Accomplishing this is easier said than done for the RCAF leadership. How then, can the RCAF maximize its efficacy in

¹³⁰DND, *Canadian Forces Aerospace: Act (Shape) Doctrine...*, iii.

¹³¹DND, *Air Force Vectors: Agile, Integrated, Reach, Power...*, 14.

¹³²*Ibid.*

delivering its core mission?

Participation at ASIC provides a mitigating avenue to the RCAF through which to explore solutions to each of the five challenge areas previously mentioned. Military acquisition is a formidable challenge and for the RCAF is extremely relevant to maintaining its interoperability with allied nations. Throughout Canada's air force history, acquisition has always been a challenge. As Randall Wakelam points out, "we begin to understand the complexity of the procurement cycle and how decision makers across government, the military, and industry are often forced to work with incomplete information and conflicting priorities."¹³³ Albeit from a publication referring to the acquisition of two fighters during the early years of Canada's involvement in the Cold War, the quote is still appropriate in today's paradigm.

The challenge lies within striking the balance between Government of Canada policy requirements and those of the RCAF. As Aaron Plamondon states, "although defence policy must clearly be based on political considerations, defence purchasing should be based primarily on military capability to allow the forces to carry out their mandate."¹³⁴ Canada is not alone in this challenge. The four other member nations of ASIC share similar challenges with their air forces and seek similar solutions to those issues.

Examining Other ASIC Members

United Kingdom

The United Kingdom faces similar fiscal restraints that can affect its acquisition of new platforms. In 2012, the RAF published *The Future Air and Space Operating*

¹³³Wakelam, *Cold War Fighters: Canadian Aircraft Procurement, 1945-54...*, vii.

¹³⁴Aaron Plamondon, *The Politics of Procurement: Military Acquisition in Canada and the Sea King Helicopter*, (Vancouver: UBC Press, 2010), xiii.

Concept (FASOC) which provides guidance for the RAF out to 2035. Recognizing that for the RAF, future operations in a rapidly changing global security environment will likely involve coalition partners, “every opportunity must therefore be taken (within the binding resource constraints) to promote interoperability and engage with as broad a range of potential air and space partners as possible.”¹³⁵ Through membership in and investing in ASIC, the UK can realize benefits gained much like those enjoyed through Canadian investment in ASIC. Although the RAF is experiencing pressure from fiscal restraints it is interesting to note that the FASOC emphasizes membership in programs such as ASIC.¹³⁶

The FASOC outlines five key principles that enable increased flexibility for the United Kingdom (read RAF) armed forces. The third principle maximizes the RAF’s potential to remain interoperable with allies by, “strengthening mutual dependence through a much greater emphasis on alliances and partnerships...a reinvigorated approach towards interoperability, engagement and the manning of influence posts.”¹³⁷ These statements are consistent with higher level direction that the United Kingdom government provided in partnership with Canada in 2011, in the *Canada UK Joint Declaration*, which stated “we will create greater interoperability between our defence forces and deepen cooperation on procurement and capabilities.”¹³⁸

The United Kingdom was an original signatory to ASCC and is a valuable member of the present day ASIC; although throughout the years of British membership

¹³⁵Ministry of Defence, *Joint Concept Note 3/12 Future Air and Space Operating Concept (FASOC)*, (London: MOD United Kingdom, 2012), 1-13, para 129.

¹³⁶*Ibid.*

¹³⁷*Ibid.*, 1-3, para 104c.

¹³⁸Parliament of the United Kingdom, “Policy paper: Canada-United Kingdom Joint Declaration,” last modified Sep 2011, accessed on 13 Sep 2015, <https://www.gov.uk/government/publications/canada-united-kingdom-joint-declaration>

this has not always been the case. Consistent in any ASIC member nation history is the ebb and flow of defence budgets that are determined by the serving government. The United Kingdom has experienced numerous peaks and valleys with respect to its defence budgets. In 1981, the RAF underwent some aggressive belt-tightening and directed numerous studies with the goal of realizing potential savings through drawdown of support to organizations outside the RAF construct. One such target was the RAF support to ASCC.¹³⁹

The United Kingdom National Director at that time, Air Commodore R.C.F. Peirse, proposed that although the benefits of ASCC existed, such as information exchange and loaning test platforms, the production of Air Standards was not cost-effective. Citing that ASCC simply mimics the work and output of NATO, he proposed that this activity cease along with numerous other suggestions that jeopardized the existence of ASCC. In his letter to the New Zealand National Director Air Commodore David Crooks, RAF ND Peirse stated “one is forced to question whether all our present activities in ASCC are as cost effective as they might be.”¹⁴⁰

This ‘divisive force’ was also observed by the Royal New Zealand Air Force Management Committee member, Wing Commander M.H. Bond, in his 1981 study where states that “the majority of the divisive influences are being originated by the United Kingdom which appears to have lost interest in the ASCC.”¹⁴¹

Foreign policy can influence the manning of foreign liaison positions. The United Kingdom underwent a Strategic Defence Review in 1997. As a result of the Review, the

¹³⁹United Kingdom, *A Brief Guide to Previous British Defence Reviews*, (London: 19 Oct 2010), 9.

¹⁴⁰Richard Peirse, *Future UK Participation in the ASCC*, (Washington: file MOD-UK-D/AD-Stand-RAF/2/1, 5 Jan 81). Letter on file at the Management Committee office archives.

¹⁴¹Bond, *An Evaluation of the New Zealand Performance and Future as a Member Nation...*, 25-27.

Royal Air Force alone experienced a reduction of 7,000 personnel.¹⁴² The United Kingdom withdrew their Management Committee representative entirely and relied solely on the RAF Air Attaché at the United Kingdom Embassy in Washington, DC to remain apprised of ASCC deliberations.¹⁴³ In 2003, the Australian Chief of the Air Force wrote to his United Kingdom counterpart noting the United Kingdom had withdrawn its member from the Management Committee in 1998. Air Marshal AG Houston recommended that as “an urgent first step” the United Kingdom return to full time membership so that the Management Committee could address a myriad of important activities that had gained notice into the late 20th Century. Interoperability gaps were emerging in the realms of Unmanned Aerial Vehicles, space, C4, and non-lethal weapons among others.¹⁴⁴

The lack of full time RAF representation at ASIC remained status quo until 2009 when the United Kingdom was once again represented at the Management Committee level with a full time officer.¹⁴⁵ This re-establishment was the result of a hard fought battle, as the prevalent sentiment within the RAF leadership was that ASIC Air Standards were a repetition of NATO documents. The argument suggested that given the continued economic pressures affecting the RAF, the United Kingdom had much to gain from renewed attendance at ASIC.¹⁴⁶

Published in 2013, the Joint Doctrine Publication 0-30 *UK Air and Space Doctrine* has reinvigorated the RAF to work towards establishing interoperability as a

¹⁴²United Kingdom, House of Commons Library, International Affairs and Defence Section, *The Strategic Defence Review White Paper*, (Note 98/91, London: 15 Oct 1998).

¹⁴³Nick Stoner, *ASIC Management Committee (MC) - UK Member*, (Washington: file 20090511-ASIC-MCUK, 11 Apr 2009), para 3. Letter on file at ASIC office archives.

¹⁴⁴A.G. Houston, *RAAF CAF to RAF Chief of Air Staff*, (Washington: file RAAF-CAF-DO-880/2003, 26 Jul 2003). Letter on file at ASIC office archives.

¹⁴⁵ASIC, *ASCC History Outline...*, para 42.

¹⁴⁶Stoner, *ASIC Management Committee (MC) - UK Member...* para 7.

priority. The document outlines what air and space power is, as well as it highlights the importance to national defence, similar to the RCAF publication *Air Force Vectors*. The RAF recognizes that “dependence on multinational cooperation means we must take every opportunity to promote interoperability and engage with as broad a range of potential partners as possible.”¹⁴⁷ Working towards a greater emphasis on interoperability and commonality will be made easier for the RAF through their continued membership in ASIC.

United States

The remaining original signatory to the ASCC Agreement in 1948 is the United States who, following the Second World War, became a leader in the coordination of efforts to improve interoperability in potential future conflicts. Patricia Weitsman states “as the tradition of fighting with friends has evolved, the United States has heightened its efforts to routinize mechanisms that make coalition warfare more successful.”¹⁴⁸ Much effort was expended by the United States to ensure numerous multinational organizations were instituted in order to meet that goal. The Air Standardization Coordinating Committee is an example and the United States was stalwart in ensuring that the right nations were involved to work together towards improved interoperability.

“Jointness” became a topic that the United States embraced with vigour due to two factors. First, the 1986 Department of Defense Reorganization Act aimed to increase joint capabilities amongst United States Armed Forces; however, due to the number of multinational or coalition operations that the United States found itself involved with, the desire to ensure ‘jointness’ at a multinational level also emerged. Second, there was the

¹⁴⁷Ministry of Defence, *Joint Doctrine Publication 0-30, UK Air and Space Doctrine*. (London: MOD United Kingdom, 2013), 2-6.

¹⁴⁸Weitsman, *Waging War: Alliances, Coalitions and Institutions of Interstate Violence...*, 27.

development of doctrine in the United States to address the complexities of multinational operations with the goal of strengthening interoperability.¹⁴⁹ These two factors combined led to the creation of two further multinational organizations whose mandate is to improve allied interoperability. The Multinational Interoperability Council formed in 1996 and the Multilateral Interoperability Program stood up in 1998.

Early concepts on what constituted interoperability were based on the notion of possessing and employing weapons systems that were the same. This proved to be of value during the Cold War for allied countries such as the United States and the United Kingdom. More recent conflicts have demonstrated that there are interoperability gaps created by varying platforms, weapons, doctrine and policy amongst coalition partners.¹⁵⁰ The United States leads the way in technological advances incorporated into their air force fleets, forever advancing ahead of the other ASIC nations' air forces. The United States is on the ever-widening path of establishing capability gap and freely recognizes that this will cause interoperability gaps to emerge. To mitigate those emerging gaps, Hiroaki Uchikura notes, "interoperability specific multinational frameworks, as exemplified by the Air and Space Interoperability Council (ASIC), are very effective."¹⁵¹ Colonel Uchikura's quote is relevant in that due to the successes of ASIC, he suggests that other nations (especially in the Pacific region) should consider developing an organization similar to ASIC to address the interoperability gaps experienced by the Japan Air Self Defence Force.

The United States recognizes the value of allies when facing a potential operation.

¹⁴⁹*Ibid*, 27-28.

¹⁵⁰Hiroaki Uchikura, *The Future of Trans Pacific Airpower Interoperability: Preparation for a Growing Anti-Access/Denial Environment*, (Washington: Brookings Institution, 30 Jun 2010), 5.

¹⁵¹*Ibid*, 10.

The modern air war is one that is planned thoroughly yet executed in a rapidly changing environment requiring close harmonization of allied assets. The air war is no different and through close harmonization of efforts, the United States achieves the highest possible impact on the battlefield. The study *Interoperability: A Continuing Challenge in Coalition Air Operations* published by the RAND Corporation states “interoperability at the technological, tactical, and operational levels is key to achieving this close harmonization.”¹⁵² The United States has its share of challenges with their defence programs, although they remain a formidable ally for the ASIC nations and can be considered the only country possessing the capabilities required to project a military presence worldwide. A valuable ASIC partner for the past 68 years, the United States has been “extremely active in standardization with other allies and friendly nations in order to achieve the highest cooperation amongst their militaries.”¹⁵³

Australia

Australia has been a member of ASIC since 1964 and was extremely active from the start. This is evidenced by Wing Commander Christofis in his communique to RAAF headquarters in 1971 where he states, “in seven years as an ASCC Member Nation, Australia has endeavored to meet this commitment and has helped to strengthen and broaden the scope of the organization.” The tangible benefits were easily identified from the beginning, but perhaps more importantly the less tangible benefit was the free exchange and development of ideas on a wide range of air matters.¹⁵⁴

Australia has had its share of challenges as well. Shortly following the Second

¹⁵²M. Hura, *et al*, *Interoperability: A Continuing Challenge in Coalition Air Operations*, (New York: RAND Corporation, 2000), 177.

¹⁵³Grimes and Ferguson, *Doctrine NOTAM: Joint Publication 3-16...*, 72-73.

¹⁵⁴L.G. Christofis, *Royal Australian Air Force Background Communique*, (Washington: file RAAF 3/2/3, 22 Apr 71), para 5. Letter on file at ASIC office archives.

World War, Australia recognized that Canada was aligning its defence spending on United States military equipment and that the United States government refusal to reduce trade concessions sufficiently prevented Australia from military equipment purchases. Therefore, as John Blaxland observes, “Australia remained more disposed than Canada to prefer British equipment over American.”¹⁵⁵

Unfortunately Australia created somewhat of a conundrum with their conflicting political and defence aims that arose coincidentally. Australian Foreign policies “stressed distinctiveness within an alliance context while supporting multilateral agreements.”¹⁵⁶ In contrast, the defence policies at the time stressed that Australian armed forces should enhance interoperability, which meant that a foreign-defence policy dysfunction arose. Politicians stressed distinctiveness while the military leaders inadvertently worked to diminish distinctiveness by working on enhanced interoperability. Initially, Australia forged greater interoperability with the United Kingdom and then with the United States, with the resulting creation of varying degrees of air force interoperability gaps.¹⁵⁷

Canada and Australia share a rich collaborative defence history and are strong allies. In the realm of global influence, Blaxland mentions that when combined, Australia and Canada have the effective power of that of “European great power proportions” and therefore “should seek ways to pool their resources to contribute to their common national interests in support of world peace and stability.”¹⁵⁸ The salient point here is that when collaborating on the development of doctrine, cooperating on technical projects or developing Air Standards in an organization such as ASIC, Australia and Canada can

¹⁵⁵Blaxland, *Strategic Cousins: Australian and Canadian Expeditionary Forces and the British and American Empire...*, 105.

¹⁵⁶*Ibid.*

¹⁵⁷*Ibid*, 106.

¹⁵⁸*Ibid*, 221.

bring to bear greater influence on the decisions of other member nations.

The Government of Australia Department of Defence White Paper of 2013 identified Australia's defence alliance with the United States, "as a pillar of Australia's strategic and security arrangements."¹⁵⁹ For the RAAF that translates into interoperability with the USAF as a priority. The 2013 White Paper emphasizes "that Australia will continue to seek opportunities to strengthen interoperability with the United States through regular training, exercising [and] exchanges...for building interoperability."¹⁶⁰ Alliance interoperability is mentioned numerous times throughout defence documentation as well as in documentation capturing public opinion. The recently released 2016 Defence White Paper renews the relationship between the United States and Australia, but also mentions collaboration between Canada and Australia in "science, technology and materiel cooperation."¹⁶¹

Resulting from extensive consultation with civilians and defence experts, in 2015 the Australian Government published *Guarding Against Uncertainty: Australian Attitudes to Defence*. Many expressed views about the desirability of Australia having the ability to conduct military operations on its own while also benefiting from interoperability with the United States. The conclusion is that Australia faces the same challenge to strike a balance between capability and interoperability. Some said that the challenge for Defence was to find ways to reduce trade-offs between these two positive goals and that Australia needed to achieve a balance between interoperability and

¹⁵⁹Department of Defence, *Defence White Paper 2013*, (Canberra: DOD Australia, 2013), 55.

¹⁶⁰*Ibid*, 41.

¹⁶¹Department of Defence, *2016 Defence White Paper*, (Canberra: DOD Australia, 2016), 138.

independence.¹⁶² Similar to Canada, Australia seeks to strike a balance between collective defence and independence. Contributing to successfully achieving that balance is provided to Australia through membership in ASIC.

New Zealand

New Zealand and Australia fought alongside with their allies (as members of the British Empire) during the Second World War. Facing the threat of Japanese expansionism following the Second World War and the spread of communism, New Zealand and Australia were concerned about their defence. Although NATO formed in 1949, as a trans-Atlantic alliance it naturally did not include New Zealand or Australia and “prompted the geographically distant countries to seek their own security guarantee and means of integration in the international system in the postwar order.”¹⁶³ The solution to their concern was the Australia New Zealand and United States Security Treaty (ANZUS Treaty) signed in 1951; culminating in a tripartite security treaty between the United States, New Zealand and Australia to protect the Pacific.¹⁶⁴ Although a Commonwealth nation and thus protected by the United Kingdom, the ANZUS Treaty formalized an agreement for New Zealand that led to closer integration with the United States, setting the conditions for invitation into further collaborative organizations.

New Zealand joined the ASCC in 1965 and immediately recognized the benefits that the Royal New Zealand Air Force could realize. In his letter to headquarters on 1 December 1965, the New Zealand ASCC representative, Wing Commander T.J. Danaher

¹⁶²Department of Defence, *Guarding Against Uncertainty: Australian Attitudes to Defence*, (Canberra: DOD Australia, 2015), 37.

¹⁶³United States Department of State, Office of the Historian, “Milestones 1945-1952. The Australia, New Zealand, and United States Security Treaty (ANZUS Treaty) 1951,” accessed 24 Mar 2016, <https://history.state.gov/milestones/1945-1952/anzus>

¹⁶⁴*Ibid.*

wrote “the many facets of modern warfare, with which the ASCC is actively associated, are constantly being revised and improved in the light of experience.” He added further in his letter that ASCC nations freely exchanged “new operational techniques, doctrines, research and technological advances.”¹⁶⁵ Indications from the outset were that ASCC was a valuable resource for New Zealand for improving standardization and interoperability.

The ANZUS Treaty underwent significant strain due to the foreign policy stance on nuclear weapons adopted by New Zealand in 1984. The newly elected government declared the entire country a ‘nuclear-free zone’ which prohibited the presence of any USN nuclear-powered vessels. The United States and Australia continued to honour the treaty obligations but in 1986, the United States and New Zealand ceased the maintenance of the security relationship between the two countries.¹⁶⁶ Notwithstanding the tensions between the United States and New Zealand, as far as membership in the ASCC was concerned, Wing Commander R.A. DeLorenzo wrote in his communique to headquarters in the Fall of 1986 “in the current era of ruptured relations with other nations, particularly the US, it is notable that as yet there has been no effect upon ASCC activities.” The professional nature of the member nations ensured that “the RNZAF does not become professionally isolated from this forum.”¹⁶⁷ Tensions between the two allies later thawed as the United States aligned with the global trend of nuclear weapon drawdown.¹⁶⁸

New Zealand and Australia share common geography, strategic space and have

¹⁶⁵T.J. Danaher, *A Description of the RNZAF Monitoring Committee Member's Duties*, (Washington: 1 Dec 1965). Held on file at the ASIC MC offices.

¹⁶⁶US Department of State, *Milestones 1945-1952. The Australia, New Zealand, and United States Security Treaty (ANZUS Treaty) 1951...*, accessed 24 Mar 2016.

¹⁶⁷R.A. DeLorenzo, *RNZAF Representation, ASCC Management Committee*, (Washington: No references, Fall 1986). Letter on file at ASIC office archives.

¹⁶⁸Colin James, “Three-step with Matilda: Trans-Tasman Relations”, in *New Zealand in World Affairs: 1990-2005* (Wellington: Victoria University Press, 2007), 135.

common interests; they enjoyed a “‘closer defence relationship’ intended to intertwine defence forces and thinking” aiming for a high level of interoperability. It was successful until early 1990s when New Zealand reduced defence spending and capability gaps were created between New Zealand and Australia. Interoperability gaps grew wider as Australia modernized its defence forces in order to remain interoperable with the United States.¹⁶⁹ Although the smallest ASIC member nation, New Zealand remains a valuable and productive nation. New Zealand maintains that although capability gaps will continue to widen with Australia, the Royal New Zealand Air Force will continue to enjoy a high level of interoperability.¹⁷⁰ Along with Canada, countries like New Zealand recognize the value of membership in ASIC, given the fact that the cost of membership is relatively low compared to the advantages gained.

RCAF Investment and ASIC Validation

The direct costs to the RCAF for membership in ASIC are fairly straightforward and relatively minimal. The RCAF commits less than \$150,000 (Cdn) annually to continue membership. This amount does not include the salary for the Management Committee representative nor the costs to the CAF for an established Out of Canada posting. In the latest Cost Sharing Agreement endorsed by all five nations, the total per annum contribution based on the Canadian fiscal year (1 April to 31 March), is \$100,000 (US), equating to equal contributions of US \$25,000 from each of Australia, Canada, New Zealand, and the UK. The United States’ contribution is provision of office space and all administrative details required to ensure that ASIC can operate efficiently.¹⁷¹

¹⁶⁹*Ibid*, 30-33.

¹⁷⁰Ministry of Defence, *Defence Assessment 2014*, (Auckland: MOD New Zealand, 2014), 33.

¹⁷¹ASIC, *Cost Sharing Agreement...*, 1.

To support the Working Group meetings that are held annually, on average the RCAF commits approximately \$110,000 (Cdn). This figure is reported as an average due to the fact that the Working Group meetings are rotated throughout the five ASIC member nations. These funds are used to pay temporary duty costs which include transportation, accommodation, meals and incidental expenses for official travel involving the National Director, Management Committee representative, the National Program Manager, the Heads of Delegation from Canada for each of the Working Groups, and the Subject Matter Experts that may be required to attend any meeting that requires an in-depth knowledge of an agenda item.¹⁷²

The RCAF has experienced great success in coalition operations with a high degree of interoperability. As recently as during the Libyan Civil War in 2011, RCAF CF-188s served as mission commanders in a number of multinational strike package missions. Demonstrating the highest degree of proficiency is worthy of accolades, but “more importantly however, serving in this role demonstrated their interoperability as the CF-188s easily integrated into coalition and alliance operations.”¹⁷³ The Force Application Working Group operates at the classified level, but suffice to say that investment in ASIC at this Working Group surely paid dividends in this particular example. Force Application Working Group Project 14A looks to enhance Air Operations Centre (AOC) interoperability. Canada’s RCAF ASIC participation has had a direct influence on the re-write of a United States Air Force Tactics Training & Procedures

¹⁷²Department of National Defence, *Bundled Event Request/Hospitality Form*, Ref 34804, (Washington: 14 Jan 2015).

¹⁷³Richard O. Mayne, “The Canadian Experience: Operation Mobile,” in *Precision and Purpose: Airpower in the Libyan Civil War* (Santa Monica: RAND Corporation, 2015), 256.

manual which serves as the de-facto Coalition AOC Manual.¹⁷⁴

Another example of validation resulting from RCAF investment in ASIC activities comes from the same campaign. The RCAF made a concerted effort in the decade leading up to the 2011 Libyan Civil War to invest in fleet upgrades. Weapons and sensor upgrades were made to the CF188 Hornet and CP140 Aurora. The CC150 Polaris aircraft were converted into strategic refueling assets which augmented the CC130 Hercules refuelers; in fact this led to the RCAF's "ability to provide fuel to almost every coalition nation." The CC177 Globemaster acquisition provided the RCAF with a new capability in the strategic airlift role. Overall, the RCAF left an indelible mark in coalition operations that reflected a "high level of air-to-air integration and interoperability."¹⁷⁵ Richard Mayne highlights the RCAF agility to adapt, given the fact that the CC130 Hercules refuelers were originally designed to provide domestic air-to-air refuelling.¹⁷⁶ These success stories can be partially attributed to Air Standards, Information Exchange and Test Project Agreements resulting from RCAF participation in Air Mobility, Intelligence Surveillance Reconnaissance, Agile Combat Support and Fuels Working Groups.

During Canada's involvement in OP Athena (Afghanistan), the RCAF deployed a Joint Task Force Air Wing in 2008. The success of that deployment was captured in *Project Laminar Strike: Canada's Air Force Post OP Athena*. The report has numerous examples of RCAF interoperability during the deployment and one such example is the Tactical Air Intelligence Specialists embedded within the Joint Task Force. The section

¹⁷⁴Air and Space Interoperability Council, *Management Committee Chair Annual Report 2015*, ASIC 3101-07-09, (Washington: 17 April 2015), 4.

¹⁷⁵*Ibid*, Chapter 9.

¹⁷⁶Mayne, *The Canadian Experience: Operation Mobile...*, 257.

was responsible for the production of intelligence products that were of such high quality and based on reputation were “sought after by partner expeditionary air wings and higher HQ.”¹⁷⁷ The success of the RCAF intelligence presence was assisted through Canada’s participation in the ASIC Intelligence Surveillance & Reconnaissance Working Group. This group addresses expeditionary requirements for standards of intelligence products and the RCAF participated in the drafting of these documents. Through active participation, Canada was able to affect the published standards thus enabling a greater capability for the RCAF as well as improving coalition interoperability on deployment.¹⁷⁸

RCAF Interoperability

Foreign policy and defence policy must be synergistic to ensure success in coalition operations. For this reason participation in ASIC is a priority for the RCAF. Ensuring that RCAF doctrine, techniques, training, technical specifications and future acquisitions are in line with other ASIC nations (who are most likely to be involved in future multinational or coalition operations) is an investment in future interoperability. The RAND study *Interoperability: A Continuing Challenge in Coalition Air Operations* highlights the fact that coalition partners may potentially agree on military objectives and missions but may differ on how to achieve the objective or execute the mission. Not addressing the core cause of the disagreement can be detrimental to the success of the operation, thus “when political motives are misaligned, no amount of interoperability, technological or otherwise, can mitigate the problem.”¹⁷⁹ This key observation underlines the importance of membership in multinational organizations such as ASIC, which at

¹⁷⁷Department of National Defence, *Project Laminar Strike: Canada’s Air Force Post OP Athena*, (Trenton: Canadian Forces Aerospace Warfare Centre, 2011), 19.

¹⁷⁸RCAF participation of the CFAWC ISR Subject Matter Expert at the ISR Working Group meetings has provided the opportunity to shape the desired outcome of published ASIC ISR Air Standards.

¹⁷⁹Hura, *et al*, *Interoperability: A Continuing Challenge in Coalition Air Operations*..., 20.

times can provide a certain modicum of diplomacy to participants.

Mentioned earlier in this paper is the inevitability of the Canadian relationship with the United States due to geography, among many other factors. That relationship at times may appear to be one-sided, with the United States holding the majority of influence with respect to military decisions that are made in Canada. This is at the core of the argument for proponents who state that Canadian sovereignty is degraded by being interoperable with the United States as a defence partner.¹⁸⁰ However, one could argue that Canada's political and military leaders are extremely intelligent and defence decisions may on the surface appear to be subservient but are actually self-serving.

John Blaxland posits that "some may argue that Canada has little choice but to push for interoperability...particularly as the option for independent operations appears to be beyond the budgetary will-power of the government." In other words, Canada has no choice but to follow the lead of the United States on many defence programs.¹⁸¹

But as Stairs and Middlemiss point out, "a fully funded interoperability arrangement might still leave Canadian decision-makers with at least some military options of their own because it would not deprive them of the capacity independently of their larger partner."¹⁸² In other words, if Canada does not participate in United States-led defence initiatives, Canada may be compelled to follow unwillingly, with little say, in a direction that is not desired. Stairs and Middlemiss are proponents of interoperability for Canada, as evidenced with their study released in June 2002 by the Institute for Research on Public Policy.¹⁸³

¹⁸⁰Lerhe, *At What Cost Sovereignty? Canada-US Interoperability in the War on Terror...*, 1.

¹⁸¹Blaxland, *Strategic Cousins: Australian and Canadian Expeditionary Forces and the British...*, 219.

¹⁸²Middlemiss and Stairs, *The Canadian Forces and the Doctrine of Interoperability: The Issues...*, 30.

¹⁸³*Ibid.*

The study mentions past participation in allied operations is consistent with Canada's modern pursuit of interoperability. The acquisition of advanced technological equipment, while reducing the risks fighting alongside "the most sophisticated military machine ever constructed in the history of humankind" are direct benefits the CAF stood to gain. Interoperability with the United States achieves the goal of Canadian diplomacy in gaining "enhancement of its political credit" in the eyes of foreign governments. According to the authors, the final benefit lies in the sad reality that the pursuit of interoperability with the United States makes "the best of a bad budget" at times for the RCAF.¹⁸⁴

Interoperability is enhanced with the United States through the pursuit of bilateral defence arrangements, such as NORAD. The decision to invest in ASIC affords certain advantages to the RCAF. The fact that ASIC has five nations working together creates a certain critical mass that has influence on the global stage. NATO adopts many of the endorsed ASIC Air Standards, as three of the five ASIC nations are also members of NATO with respected standing. Essentially three countries can influence an organization composed of twenty eight countries; this is not surprising, as Jack Granatstein made the sage observation that "steadfast small allies are important. They inspire other small nations to do their part, and groups of allies can and do sway the decisions of their superpower leaders."¹⁸⁵ This is a clear example of Canadian sovereignty influencing from a distance; the same sovereignty that many fear is eroding through participation in defence agreements.

¹⁸⁴The Institute for Research on Public Policy, *News Release*, (Montreal: 11 Jun 2002).

¹⁸⁵J.L. Granatstein, *Who Killed the Canadian Military?*, (Toronto: Harper Flamingo Canada, 2004), 123.

Canadian Sovereignty

Canada is a sovereign nation with a proud military history shared with a much larger southern neighbour. However, as mentioned earlier, there is also a school of thought that bilateral defence arrangements with the United States erode Canada's sovereignty. Thomas Barnes argues that very point, in *Canada's Military Capability and Sovereignty at the Dawn of the New Century*, where he asks "should Canada go so far along the road of interoperability that the Canadian military becomes wholly interdependent with the American military?"¹⁸⁶

If one removes the "interdependence" piece from the argument it becomes easier to see that reliance on the United States is simply a fact of geography and not one of eroded Canadian sovereignty. At the conclusion of the Second World War and early into the Cold War era, the Canadian government was adamant with the United States that a healthy defence relationship existed between the two countries; and it had the potential to continue as long as the United States did not attempt to jeopardize Canada's autonomy. Early indications are that Canadian politicians recognized the potential for loss of sovereignty, but were willing to face this issue head on notwithstanding "the asymmetry of power" between Canada and the United States. In fact, Canada was firm in its resolve to not allow the United States to affect Canadian independence in this regard. The result was that the United States recognized, accepted and reaffirmed that interdependence with the United States for defence matters could not be used "to compromise Canada's

¹⁸⁶Thomas G. Barnes, "Canada's Military Capability and Sovereignty at the Dawn of the New Century," in *Handbook of Canadian Foreign Policy*, ed. P. James, N. Michaud and M. O'Reilly 411-430 (Lanham: Lexington Books, 2006).

sovereignty and basic policy autonomy.”¹⁸⁷

Although outdated, the 1994 White Paper on Defence provides support to the notion that Canada’s sovereignty has been consistently safeguarded. It contains three points in support of this argument. The Bilateral Defence section discusses the accepted reality that Canadian defence interests are best served by “defence cooperation” between Canada and the United States. Second, the Government of Canada encourages defence arrangements between the two countries to ensure that the CAF can work with the United States. Third, and most important, is the recognition that even if Canada reduced defence cooperation with the United States, Canada still relied on the United States for protection on United States’ terms.¹⁸⁸ The first two points highlight that participation in ASIC is an example of the functional exercise of Canada’s sovereignty and the third point demonstrates that Canada freely chooses to participate in defence agreements. Maintaining membership and participating in ASIC provides Canada the ability to assert sovereign influence on five nation decisions that have the potential to affect the RCAF.

One failsafe method of protecting Canada’s sovereignty is to not participate in any multinational or coalition operations. Withdrawing from all defence arrangements with the United States and other multinational agreements theoretically provides Canada independent determination on all defence matters. However, this arrangement is neither practical nor wise, culminating in tarnishing Canada’s reputation as a stalwart military ally. Protecting and projecting Canadian sovereignty is made possible, Thomas Barnes points out, through participation in numerous multinational organizations, not from withdrawal:

¹⁸⁷Brian Bow, *The Politics of Linkage: Power, Interdependence and Ideas in Canada-US Relations*, (Vancouver: University of British Columbia Press, 2010), 34.

¹⁸⁸Department of National Defence, *1994 White Paper on Defence*, (Ottawa: DND Canada, 1994), 5.

...how can Canada avoid marginalization? By bringing more assets to the table: the U.N. table, the NATO table, the Commonwealth table and finally, most importantly, the North American table with which its fortunes are most inextricably tied and where its influence when exercised from the inside is the greatest.¹⁸⁹

Isolationist Canada is neither a realistic approach to defence matters with the United States nor a practical one. Having gained strength over decades, Canada and the United States share a unique relationship that Thomas Barnes describes as one that not even the United States and the United Kingdom share.¹⁹⁰

Canada and United Kingdom defence agreements result in a spirit of cooperation of mutual defence and maintain Canada's sovereignty whilst projecting military influence abroad. The *Canada – United Kingdom Joint Declaration* from September 2011 commits the two countries to improved interoperability; furthering this goal through cooperation in advancing technologies and collaborating on future procurement projects.¹⁹¹ This cooperative alliance resonates in the current work that occurs between the RCAF and the RAF in ASIC.

Interoperability can be considered as the insurance policy that allows Canada to maintain its sovereignty while conducting other governmental business. Without effective interoperability with other ASIC nations, Canada is compelled to arrange defence through other potentially costly endeavours or going it alone. Acting independently is favoured by the advocates of the argument that Canadian sovereignty is diminished through cooperative defence agreements with the United States. The easiest counter to that argument lies in two distinct facts. First, Canada does not have the monetary assets to develop independent protection of the entire country – hence the bilateral defence

¹⁸⁹Barnes, *Canada's Military Capability and Sovereignty at the Dawn of the New Century*..., 411-430.

¹⁹⁰*Ibid*, 418.

¹⁹¹Parliament of the United Kingdom..., last modified Sep 2011, accessed on 13 Sep 2015.

agreement, NORAD. Eric Lerhe defines “external sovereignty” as the “liberty of action outside its borders in the intercourse with other states.”¹⁹² Therefore the second point countering the “independent action advocates” is that if external sovereignty involves free discourse with other nations, and Canada can only maintain liberty by curtailing such interaction with the United States, it seems that a paradox arises.

Perhaps the proponents of the “eroded sovereignty” argument have misinterpreted the occasions when sovereignty was the necessary victim of compromise. Albeit an occasion worthy of avoiding, an example comes from issues over the Northwest Passage in the middle part of the 20th Century. As Elisabeth Elliott-Meisel writes, when referring to Canada and the United States, “both nations were forced to determine the point at which sovereignty had to be compromised in order to obtain security.”¹⁹³ The lesson here is that at times, cooperation and collaboration between two nations can be achieved albeit, it may come with compromise and exercising that compromise (rather than being forced into acceptance) is a clear indication of a nation’s sovereignty.

Conclusion

The RCAF mission is to provide the Government of Canada aerospace power that is relevant, responsive and effective. The RCAF acquires capabilities that at times are dissimilar to ASIC member nations leading to interoperability gaps. For Canada, one of the mitigation strategies providing a conduit through which to mitigate interoperability gaps is membership in ASIC. The United Kingdom and the United States have profited from the efforts expended within ASIC. The distinct advantage to Australia and New

¹⁹²Lerhe, *At What Cost Sovereignty? Canada-US Interoperability in the War on Terror...*, 11.

¹⁹³Elisabeth Elliott-Meisel, “Arctic Security in the 21st Century: Compromise and Cooperation in the Northwest Passage,” in *Thawing Ice – Cold War: Canada’s Security, Sovereignty and Environmental Concerns in the Arctic* (Winnipeg: University of Manitoba, Centre for Defence and Security Studies, 2009), 27.

Zealand is that through ASIC they are able to access NATO standardization documents that otherwise are not available to them. The investment that the RCAF makes to participate in ASIC is relatively small for the benefits gained. RCAF performance during recent allied operations is evidence that the efforts of ASIC participation directly contributed to the interoperability successes.

Interoperability is viewed as a double-edged sword. Sovereignty is a controversial topic in Canada. Pundits of interoperability state that Canada erodes sovereignty due to interdependence on the United States. Proponents of interoperability argue that sovereignty is preserved and in fact 'in practice' by collaborating with other countries. Canada has little choice but to cooperate with the United States for continental defence as the alternative to sustaining the same level of protection alone is cost prohibitive for Canada. The chapter highlighted the existence of a paradox in that opponents of interoperability, who believe sovereignty is at risk, state that Canada should not engage other countries, yet that engagement itself (done freely) is exactly part of the definition of sovereignty.

CHAPTER 5

CONCLUSION

Summary

The preceding four chapters presented the logical argument that the Government of Canada, the CAF and more specifically, the RCAF is well postured to benefit from the minimal investment required to participate in ASIC. Furthermore, Canadian sovereignty is not threatened or diminished through participation in a multinational defence organization such as ASIC. In fact, participation demonstrates quite the opposite: that Canada's participation is indeed sovereignty in practice.

The Introduction explored the theory that standardization was considered the best strategy for improving interoperability between allied nations, but in practice was difficult to achieve. Canadian sovereignty is purportedly challenged by Canada's participation in multinational defence arrangements such as ASIC. The literature review presented both sides of the argument; opponents decrying the fact that Canada loses independence while proponents demonstrate this is sovereignty in action.

Chapter two explored the close relationship Canada and the United States had during the Second World War, drawing even closer following the cessation of hostilities. The Cold War led to the continental defence of North America; that event, combined with a shift of RCAF doctrine towards that of the USAF, cemented the bond between the neighboring nations. The chapter also discussed the shift away from the United Kingdom towards the United States with respect to Canadian defence acquisitions and doctrine. An examination of how RCAF doctrine evolved from predominantly RAF-based to an alignment more with that of the USAF followed. With the addition of Australia in 1964

and New Zealand in 1965, the ASCC grew to five nations strong.

ASCC experienced both success and failure in its first 30 years but became less relevant in the 1980s. For five nations to agree on any one standard proved to be a daunting task and the trend towards fewer standards in the early 1980s was considered unacceptable. The ASCC required organizational changes to ensure future viability and the first iteration of evolution occurred as a result of the 1982 RAND Corporation review. The study concluded that substantial organizational changes were required to mitigate future atrophy and served as the catalyst for re-design.

The change with the largest impact was the conceptual shift of the ASCC mandate from that of standardization to improved interoperability between member nations. Greater interoperability through aligned doctrine, shared training and collaborative exercises was considered the future of coalition success. ASCC was an extremely relevant committee and contributed to enhancing Canada's defence. Eventually the ASCC evolved into an organization that offered greater relevance to the interoperability of five nations air forces.

In 2005, following further review and evolution, ASIC was formed. Chapter three examined the incorporated structural changes that improved productivity and enhanced efficiency. The mandate remained focused on improved coalition warfighting capabilities through ASIC Working Groups that address the full spectrum of air force operations. Information Exchange continued to be of immense value to all ASIC nations as did the work produced by the streamlined organization. ASIC nations benefitted from the ability to interact and exchange concepts which contributed and influenced the developing of national air force doctrine. RCAF doctrine aims to have a highly trained, capable and

interoperable air force; and ASIC remained at the forefront, as an available and invaluable resource that enabled the RCAF to align doctrine with its allies.

Chapter four discussed the benefits to the RCAF through membership in ASIC. In meeting the RCAF mission to provide aerospace power that is relevant, responsive and effective, the RCAF acquires capabilities that at times are dissimilar to ASIC member nations. Interoperability gaps will always exist within air forces; for Canada, one of the mitigation strategies providing a conduit through which to mitigate interoperability gaps is membership in ASIC.

Notwithstanding the challenges that they have faced, the United Kingdom and the United States have profited from the efforts expended within ASIC. Australia and New Zealand are the relative newcomers to ASIC and benefit from their membership as well. The distinct advantage to these two nations is that through ASIC they are able to access NATO standardization documents that otherwise are not available to them. The chapter also discussed that although enjoying an amicable relationship, some argued that defence agreements between Canada and the United States were perceived as challenges to Canadian sovereignty. The argument posited that further collaboration with the United States reduced flexibility for the Government of Canada in determining independent defence decisions. In opposition to this argument, the perception existed that through active participation in defence agreements, Canadian sovereignty was actually being applied or practiced.

Investment and Interoperability

The investment that the RCAF makes to participate in ASIC is relatively small for the benefits gained in ASIC. Recent events provide evidence to validate RCAF ASIC

membership. The RCAF performance during Operation Athena in 2008 and during the Libyan Civil War in 2011 is evidence that the efforts of the Working Groups at ASIC directly contributed to the coalition interoperability successes. Continued participation and investment in ASIC is the key to secure continued excellence for the RCAF.

Interoperability is viewed as a double-edged sword. One edge allows Canada to function in a coalition operation, but the other edge is viewed as a detractor to Canada's independence. Beholden to the United States for continental defence, critics believe that Canada sacrifices independence for a voice at the political table. The positive view on interoperability is that it provides Canada flexibility in the defence program and at the very least provides Canada the opportunity to be part of defence decisions with the United States, rather than having to accept decisions with little input. Improved interoperability provides the Government of Canada additional options when it comes to decisions regarding choosing involvement in coalition operations.

Australia shares a similar defence history with that of Canada; in that both countries have long shared defence and security ties with world powers, first the United Kingdom then the United States. It is no surprise therefore that Canada and Australia are close defence partners, notwithstanding the geographical distance between the two nations.¹⁹⁴ Canada and Australia benefit from improved interoperability and have agreed that in future acquisitions there should be closer collaboration to maintain that interoperability. The two nations share similar sized air forces and similar requirements,

¹⁹⁴John Blaxland, "Canada Could Be The Key to Australia's Defence," *Canberra Times*, 24 Feb 2014, <http://www.canberratimes.com.au/comment/canada-could-be-the-key-to-australias-defence-plan-20140223-33ag6.html>

therefore through collaboration they stand to gain “efficiencies and commonalities.”¹⁹⁵

New Zealand enjoys close collaboration with Canada in defence matters. Interoperability between the RNZAF and the RCAF is a priority for the respective nation’s governments. Albeit a small air force, the RNZAF strives to exercise with the RCAF as much as possible to maintain and improve interoperability aspects in operations. Demonstrating the spirit of achieving interoperability Air Commodore Kevin McEvoy of the RNZAF was quoted during Joint Warrior 14, “deploying to this exercise will enhance our defence relations... and improve interoperability with allies and coalition partners.”¹⁹⁶

Canadian Sovereignty

Ever since Canada altered its foreign policy and became well ensconced in international affairs, military commitments appeared to have affected Canadian sovereignty.¹⁹⁷ This paper argued that Canadian sovereignty is not affected through participation in ASIC. Sovereignty is a controversial topic in Canada and opponents to interoperability believe that Canadian sovereignty is eroded due to interdependence on the United States. Proponents of interoperability argue that sovereignty is preserved and in fact is ‘in practice’ by collaborating with other countries. The fact that Canada can participate in the influence of world affairs is evidence that it is a sovereign, respected and powerful nation.¹⁹⁸

¹⁹⁵John Blaxland, “Closer Australia-Canada Defence Cooperation,” in *Australia-Canada Security Cooperation in the Asia-Pacific*, (Australia: Australian Strategy Policy Institute Ltd, Sep 2013), 9.

¹⁹⁶New Zealand Defence Force, “Kiwi Aircrew at Work Over the Cold Waters of Scotland,” accessed on 25 Mar 2016, <https://www.nzdf.mil.nz/news/media-releases/2014/20140409-kaawotcwos.htm>

¹⁹⁷Andrew Richter, “Forty Years of Neglect, Indifference and Apathy,” in *Handbook of Canadian Foreign Policy*, edited by Patrick James, N. Michaud, and Marc O’Reilly 51-82, (Lanham: Lexington Books, 2006).

¹⁹⁸Roger Frank Swanson, "An Analytical Study of the United States/Canadian Defence Relationship as a Structure, Response, and Process: Problems and Potentialities," (PhD Thesis, American University, 1969), 410.

Canada has little choice but to cooperate with the United States for continental defence as the alternative to sustaining the same level of protection alone is cost prohibitive for Canada. Chapter four highlighted the existence of a paradox of sovereignty. Opponents of interoperability who believe sovereignty is at risk, state that Canada should not engage with other countries; yet proponents argue, that engagement itself (done freely) is exactly part of the definition of sovereignty. Lerhe's work utilizes extensive analytical processes and cites numerous examples to justify the conclusion that "Canada's military interoperability with the United States has little direct impact on Canadian sovereignty."¹⁹⁹ Through active membership in ASIC, the RCAF influences the defence policies and doctrine of its allies; excellent examples of sovereignty in action.

Senior Leadership

The RCAF is flying in the right direction by participating in ASIC. This paper has aimed to increase CAF senior leadership awareness of the existence, the understanding of and the modern day applicability of the Air and Space Interoperability Council. It is hoped that the underutilized potential of ASIC will eventually be realized through increased awareness and education. The minimal budget, manpower and resources that Canada has provided for the past 68 years as a member of ASIC is posturing the Royal Canadian Air Force to benefit from improved interoperability thus providing the opportunity to truly forge through adversity to the stars.

¹⁹⁹Eric Lerhe, "Canada-US Military Interoperability: At What Cost Sovereignty?" (PhD Thesis, Dalhousie University, 2012), 387.

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