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Falling short: suboptimal outcomes in Canadian defence procurement

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Falling short: suboptimal outcomes in Canadian defence procurement

by

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A THESIS

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Abstract

Why do Canada's military procurement projects often fall short of their primary goals?

Otherwise known as a suboptimal result, defence acquisitions regularly fall short of established delivery schedules, accruing cost-overruns, sometimes resulting in cancellation of key materiel.

One-hundred percent of the twenty-five Major Crown Projects at the Department of National Defence have experienced delays in achieving key milestones. Aside from cost, suboptimal

results are injurious to Canada's tri-force military. Fortunately, the matter has not gone

unchecked. A fairly recent surge in procurement research has generated a critical mass of

Canadian-focused literature. Preliminary research for this study shows a connection between suboptimal results and the organizations and personnel that populate procurement processes.

Based on the bureaucratic politics model, a competitive interaction between uniquely

conditioned policy players causes suboptimal delays and costs. Players orient outcomes to suit personal and organizational interests. The advantage of the bureaucratic politics model is the

clarity with which it illustrates decision processes. Its simplistic structure serves as an ideal

model for comparing three cases in Canadian procurement. Taken from the Department of

National Defence's Status Report on Transformational and Major Crown Projects, this study

tests the bureaucratic theory against the Tank Replacement Project, the Joint Support Ship

Project, and the ongoing project(s) to replace Canada's CF-18 Hornets. The objective is to see if these cases share common findings contributing to suboptimality. The bureaucratic model assists

the methodological goal of a structured, focused comparison. Two of the three cases demonstrate the competitive interaction between players as a factor in determining delays and cost-overruns.

Although the Joint Support Ship Project included a host of unique players competing to

determine decision outcomes, the factor that contributed to schedule slippage was the result of

widespread agreement on a build in Canada approach. This consensus led to reliance on one underequipped shipyard to approach an overambitious project. Based on the overall study, three findings prevail. First, reports by bureaucratic institutions like the Parliamentary Budget Office and the Office of the Auditor General have tremendous political capital. Second, domestic production schemes are noble, but sometimes unrealistic. Third, competition for goods is always necessary.

Preface

This dissertation is original, unpublished, independent work by the author Ian MacMillan. Small sections of the dissertation includes material sourced from publications by the author. They are cited accordingly.

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List of Abbreviations

ALSC (Afloat Logistics Sealift Capability)

AOR (Auxiliary Oil Replenishment)

ASW (Anti-submarine Warfare)

CAF (Canadian Armed Forces)

CBC (Canadian Broadcasting Corporation)

CDAI (Conference of Defence Associations Institute)

CDS (Chief of Defence Staff)

CF (Canadian Forces)

CFB (Canadian Forces Base)

CGAI (Canadian Global Affairs Institute)

DFAIT (Department of Foreign Affairs and International Trade)

DND (Department of National Defence)

GAC (Global Affairs Canada)

HMCS (Her Majesty's Canadian Ship)

IC (Industry Canada)

IED (Improvised Explosive Device)

ISAF (International Security Assistance Force)

ITC (International Trade Commission)

JHQ (Joint Headquarters)

JSF (Joint Strike Fighter)

JSS (Joint Support Ship)

KKV (King, Keohane, and Verba)

MGS (Mobile Gun System)

MMEV (Multi-Mission Effects Vehicle)

MOU (Memorandum of Understanding)

MP (Member of Parliament)

NATO (North Atlantic Treaty Organization)

NDP (New Democratic Party)

NORAD (North American Aerospace Defense Command)

NSPS (National Shipbuilding Procurement Strategy)

NSS (National Shipbuilding Strategy)

OAG (Office of the Auditor General)

ORCD (Operational Requirements Concept Document)

PBO (Parliamentary Budget Officer)

PSCP (Public Services and Procurement Canada)

PWGSC (Public Works and Government Services Canada)

RCAF (Royal Canadian Airforce)

RCMP (Royal Canadian Mounted Police)

RCN (Royal Canadian Navy)

RPG (Rocket Propelled Grenade)

TBS (Treasury Board Secretariat)

UK (United Kingdom)

UN (United Nations)

US (United States)

USAF (United States Air Force)

USMC (United States Marine Corps)

CHAPTER 1—INTRODUCTION

Background of the study, statement of the problem, and the research question

“Countless minor incidents—the kind you can never really foresee—combine to lower the general level of performance, so that one always falls short of the intended goal.” When nineteenth century professional soldier Carl von Clausewitz wrote this, he was explaining how interaction in war causes “friction”, making the simplest thing difficult ([1832] 1984, 119). Friction can happen in many different forms of interaction, and falling short of the intended goal is a truism in Canadian defence procurement, where simple acquisitions result in eleventh hour cancellations that hurt domestic industry and force the military to do more with less; even when purchases are delivered, they are often over budget and overdue.

As Senior Analyst at the Canadian Global Affairs Institute (CGAI), David Perry is Canada’s venerable expert on defence procurement. Published by CGAI and the University of Calgary’s School of Public Policy, Perry produces an annual report analyzing acquisitions that the Department of National Defence (DND) and the Canadian Armed Forces (CAF) classify as the most critical projects over the \$100 million Major Crown Project threshold¹ (Perry 2015, 2017). A link to these projects can be found in DND’s Departmental Performance Report 2015/2016, under “Status Report on Major Crown Projects” (Department of National Defence 2016, 45). Perry ‘uses this list in its entirety to remove the element of subjectivity in determining which projects to include’ in his report. DND’s list deals exclusively with projects for defence equipment acquisitions. It excludes infrastructure, information management, and information technology and service projects (Perry 2017, 1). Perry found that of the twenty-five projects

¹ Perry’s annual report is a continuation of the 2006 publication of *An Opaque Window: An Overview of Some Commitments Made by the Government of Canada Regarding the Department of National Defence and the Canadian Forces; 1 January 2000 – 31 December 2004*. It was written by David Bercuson, Aaron Plamondon, and Ray Szeto. Elinor Sloan continued the report in 2013 and 2014.

listed, two had no data entered in 2016—the Future Fighter Capability Project, and the Joint Unmanned Surveillance and Target Acquisition System Project. Of the other twenty-three projects, Perry showed that compared to the previous year’s schedule, ten were proceeding on schedule, and twelve projects were late. Central to the point of this study, Perry showed “every one of the projects examined has experienced a delay in achieving at least one published milestone” (2017, 10). Unequivocally, Canada has a problem delivering defence procurement projects in a timely manner. And wasted time costs money.

Aaron Plamondon identifies the Maritime Helicopter Project—the replacement of Canada’s Sea King helicopters which began in 1986—as “the worst case of procurement incompetence on the part of the government and the DND” (Plamondon 2008, 26; also see Plamondon 2010). More than a decade has passed since Paul Martin’s Liberal government awarded the Sikorsky Aircraft Corporation a contract to replace Canada’s Sea Kings with twenty-eight Cyclone maritime helicopters. As of March 2017, only eleven Cyclones had been delivered (Department of National Defence 2017). Although Brian Mulroney’s Progressive Conservative government initially complicated the Sea King replacement by tacking-on a search and rescue helicopter acquisition, Plamondon identified Jean Chrétien’s partisan-driven handling of the purchase as the primary factor affecting problems with project delivery and cost.

Canada’s 1993 general election came during an economic recession, and Mulroney’s 1987, \$4.4 billion contract award for thirty-five of European Helicopter Industries’ Cormorant led Chrétien to label the variant a “Cadillac” of helicopters (Byers and Webb 2013). Chrétien argued the purchase was unnecessary, mainly because the end of the Cold War supposedly rendered sub-hunting obsolete, but also because the Liberal government was intent on achieving greater fiscal austerity in the context of an economic recession. (The Cormorant was more than a

sub-hunter, but that did not really seem to matter.) Once Chrétien was elected he immediately cancelled the purchase, accruing a \$478.3 million penalty. The release of the Chrétien government's 1994 White Paper on Defence revealed a need for maritime helicopters (Department of National Defence 1994, 8), but the prime minister had committed to avoiding the Cormorant. It was a "Cadillac" and all Canada required was a basic economy class vehicle. Sikorsky appeared to have something Chrétien could support.

Chrétien's government acknowledged the capability shortfall but obstinately pursued an ostensibly less expensive maritime helicopter. Cabinet emphasized the need for a statement of operational requirements outlining a maritime helicopter with less advanced technology. The Liberals implemented "A lowest-cost-compliant matrix" which stipulated that if a company submitted a bid just one dollar less than the others, it would be accepted regardless of quality and value considerations (Plamondon 2008, 25). This not only contradicted the Treasury Board Secretariat's contracting policy (Treasury Board Secretariat 2013), it extended the delivery stage of the procurement timeline from 2005 to 2008. The original replacement was also intended as an off-the-shelf purchase, a requirement that was amended when it was discovered Sikorsky did not have an existing helicopter. The government however, failed to put accountability mechanisms in place to ensure companies could fulfill requirements and deliver on time (Office of the Auditor General 2010, 15; Sloan 2013, 10).

Although the Cormorant was viewed as a superior, off-the-shelf product, Sikorsky was awarded a \$4 billion contract in November 2004. After missing their first delivery date in 2008, amendments have followed more missed deadlines (Plamondon 2008, 25). Elinor Sloan argues these delays have been the result of a combination of Sikorsky overcommitting to "more than was technologically possible" and the DND being unaware of the degree to which the Cyclone

was a developmental helicopter (2013, 10). Because Sikorsky was to adapt an existing commercial helicopter—the S-92—for military marine use, the Cyclone only existed on the drawing boards. The Office of the Auditor General reported that DND “did not adequately assess the developmental nature of this aircraft” (2010, 15). But as Plamondon notes, the Liberal government switched its requirements from off-the-shelf to developmental in order to accept Sikorsky’s bid (2008, 24).

This case demonstrates the distance a prime minister will travel to save political face. For the purposes of this study, it serves as an appropriate introduction into the gritty, politicized world of Canadian defence procurement. Clausewitz’s interaction in war leads to falling short of the intended goal. The interactive component of Canadian defence procurement—between elected officials, bureaucrats, and advocates and industry players in the private sector—appears to contribute to suboptimal project results.

Otherwise known as “falling-short”, for the purposes of this study, a suboptimal result is when one or more of the primary goals of a government procurement project are not met. In this specific study, a primary goal addresses the delivery schedule, and the cost of a defence procurement project. When a project fails to meet one, or both of these goals, it has experienced a suboptimal result. Likewise, a project cancellation is suboptimal, especially when the project is designed to address an essential military necessity, and has accrued costs prior to cancellation. Canada’s Department of National Defence cannot initiate Major Crown Projects (ie acquisitions over \$100 million) without cabinet approval (Williams 2006, 4). The three cases selected for this study are all Major Crown Projects. A cancellation therefore reflects the dismissal of an assessed need of the Canadian Armed Forces, potentially jeopardizing personnel safety, as well as the security of Canadians. Conversely, an optimal result is when a government project meets its

primary goals (ie timely delivery and cost). None of the cases selected for this study have attained optimality.

Regarding the replacement of Canada's Sea King maritime helicopters, both DND and the Chrétien government demonstrated negligence leading to various suboptimal results. Addressed through Perry's reports—but with different language—suboptimality is an issue that transcends the Sea King saga. Just as falling short of the intended goal is an axiom in Clausewitz's explanation of interaction, suboptimal results are common in Canadian defence procurement. I therefore ask the following question: *why do Canada's military procurement projects often fall short of their primary goals?*

Significance of the study

Failure to deliver equipment purchases on time negatively affects the military branch to which these purchases are assigned. Failure to deliver a project on budget hurts the Canadian taxpayer. It can also hurt the military if excessive costs force the government to scale back a capability. Cancellations can hurt Canada's domestic defence industry, which often struggles to remain competitive in the global economy (Proudfoot 2016). Cancellations are bad for the military, which is sometimes forced "to do more with less." (Middlemiss 1995, 405) As important, cancellations are potentially risky for Canadians whom depend on the government for security. Understanding why projects fall short is fundamental to improving Canadian defence procurement, which is fundamental to enhancing the nation's overall security. The intent of this study however, is not public policy advocacy. Rather, it is designed to elucidate the factors affecting suboptimality through an examination of the interaction among participants in the

defence procurement process. Findings will contribute to the subject's budding mass of literature.

In one form or another, Canadian defence literature has existed as long as Canadians have taken responsibility for their own security. The volume of this literature increased in the post-Second World War era. It was not until the 1980s when defence procurement developed its own particular subcategory, focusing on the peculiar narratives of specific acquisitions. This initiative continues to this day, providing a rich source of information on topics such as Canadian industrial participation, partisan politics, strategic and operational considerations, and solutions to procurement process issues. A host of publications have addressed these issues, comprising a critical mass of empirical information. As a next step, a theoretical approach will provide a degree of structure and clarity useful in determining what goes into the policy making process, untangling the interaction among the various institutions competing to influence the outcome of defence acquisitions. For comparative purposes, modeling also enables testing to determine whether generalizations can be drawn between cases. (The goal however, is not to draw generalizations across Canadian defence procurement in its entirety.) The goal is to see if the bureaucratic politics model is useful in examining Canadian defence procurement.

Theoretical approach

Among the literature addressing organizational decision making, the bureaucratic politics model contains a clear and intuitive set of analytical tools ideal for locating the relevant information necessary to answer the research question. With a clear unit of analysis and set of organizing concepts, this particular model focuses on the interaction among the primary participants in government decision making (ie elected officials, bureaucrats and military, advocates,

companies, and the press). Participants differ on decision outcomes, making their interaction competitive. In essence, the bureaucratic politics model examines government decisions and actions as the output of an interactive process among different policy players, each with unique perspectives on the best choice of action. Because of these varying perspectives, players are *de facto* competing to determine outcomes (Allison and Halperin 1972). Although this study reflects a wide range of bureaucratic politics literature (Allison 1969, 1971; Halperin 1974; Nossal 1979, 1984, 1995; Atkinson and Nossal 1981; Kozak and Keagle 1988; Allison and Zelikow 1999; Halperin, Clapp, and Kanter 2006; Desrosiers and Lagasse 2009; Marsh 2012; and Lai and Kang 2014), the applied theory relies heavily on the model as presented by Allison and Halperin (1972).

Case selection

The three cases selected for this study are the Tank Replacement Project, the Joint Support Ship Project, and the two iterations of the CF-18 replacement (ie the Joint Strike Fighter Project and the Future Fighter Capability Project). In line with Perry's selection criteria, each of these cases exceed the \$100 million dollar threshold, and are included on DND's departmental project list. All three of these projects have experienced varying combinations of suboptimal results.

Since the Second World War, Canada has continually developed three strong service branches: the army, the navy, and the air force. Relative to many nations—America in particular, but military powers much smaller than the US as well—these three branches are not equipped with high quantities of state-of-the-art weaponry (Bender 2015). However, certain weapons platforms have assumed a central position in protecting Canada against security threats, and in aiding the civil power in its pursuit of foreign defence goals. As in the past, the foreseeable

future of Canadian defence includes tanks, support ships, and fighter aircraft. Examining how these weapons became central to Canadian defence policy reveals why they are being discussed here. Tanks, support ships, and fighter jet interceptors are essential to Canada's foreign and domestic goals. They are essential to Canada's political stability. Replacing them on-budget and on-time should be paramount.

Organization of the study

This study contains a total of eight chapters. Chapter two reviews the state of Canadian defence procurement literature, an area that has grown considerably since the 1980s. A new critical mass of research has revealed the peculiar narratives of specific acquisitions, generating new ideas for improving the process. The third chapter addresses the utility of the bureaucratic politics model, which serves as a guide for deconstructing the interplay of institutions and their members. Clarity flows from the bureaucratic politics model's unit of analysis (ie the decisions and actions of government), and its organizing concepts (ie Who plays? What determines each players stand? And how are players' stands aggregated to yield governmental decisions and actions?). The model does not however, say anything particular about specific institutions, avoiding reductionist statements such as the NDP is indifferent to Canadian defence goals, or Liberal governments have a track record of deprioritizing procurement spending. It simply provides an organizing principle to gather empirical data, analyze case specific results, and compare findings to determine if generalized inferences can be made across the three cases. Beyond clarity, the advantage is avoiding blame that may appear arbitrary. That is, it circumvents an *a priori* thesis statement. Chapter four addresses the study's methodology. Without defining each of the methodological aspects here, this chapter examines three primary headings: qualitative research;

structured, focused, comparison; and data collection and analysis. The fifth, sixth, and seventh chapters deal with the case studies (see above) and their respective findings. Each case is first addressed in terms of the relative utility of the equipment being discussed, followed by a detailed account of the replacement process. Following each individual case, a results section addresses case study findings in the context of the bureaucratic politics model. Chapter eight addresses individual results, and proceeds to compare these through a holistic, global analysis, contextualizing the findings again with the help of the bureaucratic politics model.

CHAPTER 2—LITERATURE REVIEW: THE STATE OF CANADIAN DEFENCE PROCUREMENT RESEARCH

As a popular and special area of literature, analysis of Canadian military procurement emerged in the 1980s. It is true that authors in previous decades discussed weapons acquisitions in Canada. Among Canadians, the Ross Rifle scandal for instance, is a case almost as well known as the Great War itself (Plamondon 2008). However, much of this written discourse pays greater attention to the defence and foreign policy context than the peculiar histories of specific acquisitions. Especially the 1941 Hyde Park Declaration, which essentially made possible a once robust Canadian weapon's industry, pales in comparison to the event in which it occurred (Mackenzie King 1941). Until more recently, Canadian military procurement has been a second tier topic in the greater scheme of national defence policy.

In the three and half decades following the end of the Second World War, Canada often struggled with procurement issues. Although the matter was discussed, as a topic it did not constitute its own area of study. This changed towards the end of the Cold War. As a growing number of procurement projects veered into the realm of schedule slippage, cost-overruns, and cancellations, a body of literature emerged, unambiguously attentive to the problems in specific acquisitions.

Beginning with the post-Second World War era, the fundamental literature that touches on Canadian military acquisitions is reviewed. More recently, Canadian defence scholarship has experienced an increase in the volume of procurement literature. The next step is to analyze Canadian military acquisitions with decision modelling. Addressing a gap in theoretically based research, the bureaucratic politics model will help clarify the actors involved in acquisitions, and why competition characterizes the actor interactions. Avoiding the normative, *a priori* debate about which politician made the biggest mistake, this study will contribute to understanding

Canada's defence procurement process, without assigning arbitrary blame. The purpose is to be honest about what is really happening.

Procurement in Canada's post-war defence literature

With the end of the Second World War, Prime Minister William Lyon Mackenzie King was intent on greatly reducing the size of Canada's military, both in terms of manpower and budget. While the military began planning for another major war, King's political sense led him to prioritize staving off another depression. The end of the war meant massive reductions in military related spending, greatly cooling the economy. Influenced by Keynesian economics, a 1943 report by the Committee on Reconstruction argued "that social security had to be the responsibility of the community as a whole and that it had to include protection against unemployment, sickness, and old age." (Granatstein 1977, 175) The author of the report, Dr LC Marsh, concluded Canada's economy could be sustained in the near future by providing welfare payments to war weary citizens, especially those affected by closures in munitions factories and other elements of the wartime industry. Presenting plans for peacetime conscription, the military envisioned Canada as a middle power with a corresponding army. The Canadian Army—which replaced the Militia of Canada—sought a peacetime Active Force of 55,788, and a Reserve Force of 177,396. King would have none of it. Consistent with his prewar political stance, the prime minister's spending priority was the social welfare of ordinary Canadians. Under his Minister of Defence, Brooke Claxton, by 1947 the army had been reduced to a meagre 13,985. The 1949-50 budget for the Canadian Army was just \$124 million, leaving little to spend on the acquisition of new equipment. Much of what the army was using at that time was left over from the war (Granatstein 2011, 315-20).

In an era where major war seemed normal, King understood Canadians longed for peace and a higher standard of living. Reducing the size of the army was just one symptom of a growing Canadian political culture that viewed defence as secondary to a number of evolving goals, generally, the welfare of ordinary Canadians (Granatstein 1977). What slowly developed over the course of several decades was a realization that, while this prioritization was politically expedient, Canadian defence interests suffered. As this realization took hold, a broader catalogue of Canadian defence literature began to emerge.

This emergence did not necessarily begin in the post-Second World War era. Journalists such as JW Dafoe and AG Dexter delivered academic level analysis of Canadian foreign relations and defence matters long before Hitler stormed his way through Europe (Gibson and Robertson, 1994: xiii). Historians like WT Waugh (1928), CP Stacey (1936), and AF Duguid (1938) gave excellent accounts of the conflicts and military events that shaped the country (Cook 2006). As the war ended, and the international system changed, procurement literature slowly emerged, although it was mostly within the broader context of Canadian defence and foreign policy.

In discussing the Atlantic-Triangle and the Cold War, Edgar McNinnis was critical that Canada—a member of the North Atlantic Treaty Organization (NATO) and the North American Aerospace Defense Command (NORAD)—had not effectively assessed its equipment needs vis-à-vis nuclear deterrence (1959). Canada had tremendous difficulty keeping pace with American and Soviet technological advancement, something evident in the Avro Arrow debacle. In discussing Canada's future in global politics, James Eayrs wrote the cancellation of the CF-105 Arrow was justified by its obsolescence in the dawn of the missile age. The experience of the Second World War taught Canadians that to prevent an aircraft shortage during conflict it would

need its own aircraft industry. Unfortunately, this turned out to be more difficult than imagined (Eayrs 1961). Both financially and in terms of person power, the cost of sustaining a cutting-edge fighter program was untenable. And as Jon McLin noted, so too was the cost of wielding tangible influence in NATO. Scrapping the Arrow in exchange for the American produced Bomarc missiles and the McDonnell CF-101 Voodoo interceptors, left some Canadians with the belief they had been victimized by the American aircraft industry. In McLin's point of view, it was Canadian industry that simply could not compete in terms of cost and delivery dates above a given level of technological sophistication (1967).

Examining Canada's role in post-Second World War peacekeeping and deterrence, James Eayrs argued Canada struggled desperately to pay its share in continental defence. Canada could afford the technology of the Mid-Canada Line, but the shift from long range bombers to Intercontinental Ballistic Missiles (ICBM) made the line obsolete in less than a decade. The more capable Distant Early Warning Line, in conjunction with improvements to North American detection systems (eg the \$28 billion Ballistic Missile Early Warning System), outpaced Canada's ability to participate alongside the United States, even on a scale of relative parity (Eayrs, 1972). Especially during the Second World War, Canada learned that to hold even modest influence in the international political arena, it would have to provide considerable capital expenditure. John Holmes argued Canada gleaned from the post-war peacemaking process that a policy making voice on the world stage required deep pockets in near perpetuity (1979). Canada struggled to keep up with the innovative military industrial complex, and most citizens were not troubled by this fact.

The examples above—which span the first three and a half decades of post-war Canada—are academic books addressing Canada's foreign and defence policies. Although

sections of chapters discuss Canada's weaponry needs, these publications do not focus on procurement as a central theme. (Procurement was secondary in the overall schematics of the growing field of defence literature.)

There are of course other examples of Canadian defence literature written during this period (eg Tucker 1952; Eayrs 1964; Morton 1970; Stacey 1970). There are also publications written before and after the Second World War covering Canada's pre-Second World War foreign and defence policies, and in the process, touch on issues of military equipment (eg Knaplund 1922; William et al. 2010). Important to understand is the gravitation towards discussing the expense of equipping a national military to both participate in war as well as deter it. In fact, this particular discussion is as old as the Canadian military itself (Plamondon 2008). However, it is really in the 1980s when a particular body of literature, one dealing exclusively with procurement, slowly emerged to analyze economic and industrial considerations, partisan politics, strategic and operational needs, and ideas for solving process problems.

The emergence of procurement as a special area of Canadian defence literature

Economic implications have held a central position in the discussion surrounding Canadian military procurement. Understanding the political capital that can be accrued through job creation, successive governments have sometimes prioritized defence contracts that guarantee investment in the Canadian domestic economy. Making industrial goals the central focus of a defence procurement project can be problematic. RB Byers argued that when economic considerations assume a greater importance than defence in shaping Canadian defence policy, it detracts from the ability of the military to fulfill its continental defence obligations with the US, collective security through support to NATO, assisting the United Nations (UN), especially with

peace keeping missions abroad, and protection of sovereignty through national measures. As “resources for defence are to purchase national and international security” the government must balance its political desire for economic and industrial benefits with providing the military with the equipment necessary to fulfill its duties (Byers 1985, 132-5).

As discussed by Alistair Edgar and David Haglund, an additional problem in maintaining a strong industrial defence base has been the temptation to make unethical sales. Although many Canadians support arms exports, many abhor the sale of weapons to countries with persistent human rights abuses. With the exception of sales to the US, Canada’s defence exports require approval by the minister of foreign affairs and a special permit (Edgar and Haglund 1995, 139-40). This however, has not always prevented weapons from reaching governments with human rights abuse records, such as Saudi Arabia and Colombia (Berthiaume 2018). As argued by Scott Proudfoot of Hillwatch—an Ottawa based government relations firm—the matter is somewhat more nuanced. Exporting military equipment to countries such as Saudi Arabia is essential to the survival of Canadian defence companies. Export sales comprise \$6.4 billion annually, half of Canada’s defence industry revenues. Canada’s small military simply does not generate enough contracts to maintain a profitable Canadian defence sector (Proudfoot 2016). And as Thomas Juneau argued, there is no evidence suggesting human rights abusers would change their policies should Canada withhold the sale of defence materiel (2016).

Proudfoot’s argument is not a popular one among groups such as Amnesty International and Project Ploughshares (Skyba 2018), but given the challenges of competing in foreign defence markets, a small country like Canada has few options if it wishes to maintain a defence industry. Michael Slack and John Skynner for instance, argued the Canadian government must assist its domestic defence industry to anticipate emerging policy trends in the US. Namely,

Canada must pay attention to areas of technology deemed critical by the US military. A declining US military budget will provide opportunities in areas like retrofitting. Shrinking contracts in the US will compel prime contractors to repatriate sub-contractor work. However, increased emphasis on interoperability should signal to Canadian manufacturers a need to invest in technology that helps the US achieve this goal (Slack and Skynner 1995, 386-8).

Slack and Skynner's optimistic outlook aside, Canada's defence industry is chronically plagued by boom and bust spending cycles. Canada's defence industry is forced to invest in an unpredictable procurement environment (Nossal 2017).

As Carl von Clausewitz argued, political leadership must always be the driving force behind military action ([1832] 1984, 89). The post-Second World War era has seen domestic industrial growth included in government defence calculations. Acknowledging Clausewitz's maxim, Dan Middlemiss argued the "problem is that Canadian politicians do not get involved in the right way" (1995, 407). He noted political obsession with the "pork-barreling" aspect of military equipment contracts is often to the detriment of the Canadian military. The search for the right mix of industrial benefits and military criteria often follows a recipe where the former takes precedent, largely ignoring the reason why an acquisition process began in the first place. While political goals form the basis of all military actions, partisan based interests can fail to advance the national interest (Middlemiss 1995, 407). Aaron Plamondon placed partisan political considerations first among reasons why "Canada has often failed to effectively design, produce, or even to purchase the weapons and equipment its military needs to carry out the priorities of the civil power." (2008, 2) From the opposition voting down Prime Minister John A Macdonald's \$500,000 Militia Bill in 1862, to the 1959 cancellation of the Avro Arrow project,

as well as the agonizing saga of the Sea King replacement projects, partisan political goals have distorted Canada's procurement process (Plamondon 2008, 2010).

While the foremost example of Canada's problematized military acquisitions is the Sea King replacement, not far behind is the ongoing replacement of Canada's fighter-jets, the CF-18 Hornets. Because the Conservative government chose to forgo competing the replacement of the Hornets, political opportunism and a general lack of public trust forced former Prime Minister Stephen Harper to freeze the funding envelope allocated for the purchase of sixty-five F-35 Joint Strike Fighter aircraft. Plamondon compared former Liberal leader Michael Ignatieff's claim that the Conservatives were wasting taxpayer's money during a "precarious period of economic recovery" to Jean Chrétien's 1993 election pledge to cancel the contract awarded to European Helicopter Industries to replace the Sea Kings (2011, 265-6). Whereas Chrétien was able to convert the claim that former Prime Minister Brian Mulroney was buying an overpriced replacement during an economic recession into political victory, Ignatieff lost his seat in the 2011 federal election. The former Liberal leader did however create a political environment unfavorable to the Conservatives bid to buy the F-35, something Plamondon attributed to partisan politics, not an objective appraisal of the aircraft vis-à-vis military needs (2011, 274).

The JSF Project, and others like it, demonstrates that politicians are willing to subjectively call into question military purchases, not necessarily on the basis of military concerns, but on the basis of partisan interests. They will twist the optics of a purchase—creating a problem where there was not one previously—to rally public support. It is of course within the mandate of elected governments to include industrial production goals alongside equipping the military, but as Middlemiss (1995) and Plamondon (2010) pointed out, there is a necessary balance that is often missed.

Governments will often proclaim the operational utility of a proposed acquisition, but unsurprisingly, much of their rhetoric focuses on industrial considerations and vague platitudes about how a given instrument is the right choice for men and women in uniform. Much of the focused and comprehensive strategic and operational analysis comes from academics that study the military. Interestingly, academic literature sometimes subtly manifests aspects of a widely-held public debate, distinguished however, with rigorous research to substantiate arguments.

Regarding Canada's participation in the American led Joint Strike Fighter program, political scientist Rob Huebert argued the F-35 is Canada's only viable option if it decides to retain a fighter capability to 2050 (2011, 236). On the other side of this debate, political scientist Michael Byers and policy analyst Stewart Webb viewed the F-35 as a risky option for a country with little money to spend on equipping the military (2011, 225). From a strategic point of view, Huebert echoed a prescriptive argument put forward in 1973 by Nils Orvik. Namely, that without an aircraft like the F-35 to protect its share of North American aerospace territory, the US might demand access for its own fighter aircraft, violating Canadian sovereignty. Byers and Webb however, insisted the high cost and maintenance complexity of the F-35—not to mention the meagre order of sixty-five proposed by Stephen Harper's former Conservative government—would make it less available to fill the role for which it is intended. A less expensive and simpler option would satisfy Canada's territorial interests without imposing onerous costs on Canadian taxpayers (Byers and Webb 2011, 218-22). Operationally, Huebert viewed the F-35 as necessary for overseas air force deployments, which carry an increasingly high risk of exposure to surface-to-air missiles (Huebert, 2011, 235-7). Byers and Webb argued stealth is unnecessary given Canada's predilection for assuming a secondary fighter aircraft role in "hot conflicts" (Byers and Webb 2011, 218).

Canada's global objectives have typically reflected the interests of its closest allies and trading partners. With the Second World War for example, a more confident Canada gravitated away from the United Kingdom, towards the United States. Political scientist Justin Massie saw the Conservative government's attempt to purchase the F-35 (announced July 2010) as a function of a consistent political goal—pursued by successive governments—to preserve Canada's image as a reliable partner in continental defence and global security (2011, 261-2). Purchasing the F-35 was about promoting Canada's reputation as a prominent ally of the United States—a strategic consideration in its own right (Massie 2011, 261).

The multiple cases involving cost overruns, schedule slippage, and cancellations have generated a considerable amount of literature discussing Canada's military procurement process. Whereas government agencies like the Office of the Auditor General (OAG), and the Parliamentary Budget Officer (PBO) investigate why specific procurement cases fall short of their goals, academics and think tanks will address both the specific and the general, generating sociological and psychological insights about the interaction of politics and other motivating factors.

Both the OAG and the PBO can provide parliament with fact based information and analysis, as well as expert advice on military procurement specifically. Whereas the OAG utilizes the methodological standards set by the Canadian Institute of Chartered Accountants to audit government programs, comparing project goals with results and assessing compliance with legislation, regulations, and policies, the PBO generally responds to requests from committees or parliamentarians for specific information on the state of the nation's finances, government estimates, and trends in the Canadian economy. Both agencies evaluated Canada's JSF Project, as well as other procurement projects. The OAG's JSF audit revealed the DND underestimated

the full life cycle costs of the F-35, and provided recommendations for how DND could refine its cost calculating methodology (2012, 29-30). Using a cost per kilogram ratio calculated over a thirty-year life cycle, the PBO report identified sixty-five F-35s would total US\$29.3 billion or US\$450 million per plane; a considerable difference from the Conservative government's estimate of \$16 billion over twenty years (Parliamentary Budget Officer 2011, 32). Although the PBO report did not recommend how the government should solve process problems in Canadian military procurement, it held there is a more effective way to estimate procurement costs.

Craig Stone argues Canadian military procurement projects are hindered by the number of government departments that are involved. The DND focuses on equipment selection. Public Works and Government Services Canada (now Public Services and Procurement Canada) deals with contracting legislation, policy, and guidance. Industry Canada (now Innovation, Science and Economic Development) governs economic and industrial benefits. Each of these departments have their own policy agendas, which are not always congruent. Stone notes a major capital acquisition cycle can last almost sixteen years, beginning from the time a government acknowledges an operating deficiency in its military, to the close out of a project designed to solve the deficiency (2009, 93-106). Arguing the process is "too lengthy and too costly", Allan Williams—a retired Assistant Deputy Minister (Materiel) at DND—believes previous attempts at reform have failed because they "misdiagnosed the problems." (2006, 1) To improve the way the government buys military equipment he says, it is essential to understand both the formal process and what motivates the people involved. Politicians are motivated by the favourable publicity they receive from securing economic benefits. Public servants seek to protect their authority over program administration. Military personnel are motivated to acquire state-of-the-art equipment as fast as possible; to avoid long contracting processes, they will skew or "wire" requirements

toward one product or supplier (Williams 2006, 101). To Williams, successful procurement depends on successfully managing the players and their organizations. Primarily, this involves more rigorous parliamentary oversight, greater process transparency, and accountability for large mistakes (Williams 2006, 102). Stone however, believes Canada will likely “just continue to do the best with what it has.” (2009, 106)

The Conference of Defence Associations Institute (CDAI) published a paper in April 2006 arguing politicians often discuss the importance of improving Canada’s defence procurement process without accurately identifying what improvement actually involves. CDAI argues the problem is that Canada’s political decision makers lack a decision-making template to help balance regional industrial aspirations with military requirements. It is unlikely that Canada will switch to making equipment purchases irrespective of industrial benefits. To mitigate common problems however, CDAI shares a ten-point template designed to guide government acquisition strategies. Salient points include selecting a procurement strategy that minimizes risk through careful consideration of supplier past performance, and allaying over-ambition by establishing realistic timelines and cash flow thresholds (Conference of Defence Associations Institute 2006, 61-3).

CDAI’s general argument is well taken. Successive governments come to power boasting they will secure Canadians by ensuring the military has the equipment needed to carry out their missions. In terms of procurement, defence white papers often promise new and better equipment, or even spin an equipment or doctrinal change to give the impression of operational improvement. A key example is Canada’s numerous defence white papers (Department of National Defence 1964, 1971, 1987, 1994, 2008, 2017). They do very little to address chronic acquisition problems. In fact, they are symptomatic of the disjointed interaction between

government goals and the process of implementing them. Writing about an idea is very different from carrying one out. Hard evidence of this can be seen in a series of studies that observed a number of the more important procurement projects spanning the last decade.

As previously mentioned, a 2006 study by David Bercuson, Aaron Plamondon, and Ray Szeto, tracked eighteen procurement projects exceeding \$100 million. Years later, Elinor Sloan (2013, 2014), and defence analyst David Perry (2015, 2017), continued the study. Common among all of these iterations is the conclusion Canada's procurement process is plagued by a lack of a strategic vision, overly ambitious procurement goals, unpredictable budgets, insufficient numbers of procurement staff, and management shortcomings. For instance, Sloan's study concluded projects are symptomatic of the strategic approach Canada takes in equipping the military, prioritizing industrial benefits over delivering key equipment on budget, and on time. Perry observed that although the defence procurement budget doubled between 2004 and 2009, the number of materiel staff was never increased to match it. In 2003, the ratio was 2,600 materiel staff for every \$1 billion spent on procurement. By 2009, the ratio had shifted to 1,800 staff for every \$1 billion, and since then it has gotten worse. Suboptimal results of schedule slippage, cost overruns, and cancellations have generally left Canadian Armed Forces members without the necessary equipment to pursue the commitments the government chooses (Sokolsky 1995, 2). As Bercuson, Sloan, and Perry point out, this has become the rule and not the exception.

What is missing and the way forward

Beginning in the 1980s, procurement analysis began to emerge as an important and unique aspect of Canadian defence literature. The topic was of course discussed prior to that era. It is

nearly impossible to look at defence policy without confronting weaponry and its purchase. However, the topic did not constitute a specific research area in which analysts and academics focused primarily on procurement as opposed to other areas pertaining to Canadian defence. There is now a critical mass of procurement literature primarily addressing economic and industrial issues, partisan politics, strategic and operational needs directly related to an acquisition, and process solution ideas. With the exception of two peer reviewed journal articles by Atkinson and Nossal (1981), and myself (MacMillan 2017), Canadian military procurement has not been discussed through the lens of a theoretical approach.

What has emerged as the critical mass of procurement literature qualifies as a significant contribution to the study of Canadian military acquisitions. And it stands to reason many of these works were informed by a political ideology or even an implicit theoretical position. The key difference is they have not explicitly addressed procurement in a theoretical capacity. However, with certain publications, it is possible to infer certain ideological and theoretical dispositions. For instance, emphasizing the practical strategic and operational elements of procurement, works produced by RB Byers (1985), Huebert (2011), Bercuson, Plamondon, and Szeto (2006), Sloan (2013, 2014), and Perry (2015, 2017) demonstrate a subtle yet present element of *realpolitik*. Byers and Webb (2011) however, favour a softer approach to Canadian defence, insisting Canadians are better served by low taxes, and a secondary role for their combat aircraft. Addressed by Edgar and Haglund (1995), Proudfoot (2016), and Slack and Skynner (1995), the matter of foreign defence sales is similar in that the pragmatism of selling to the highest bidder—regardless of political differences—is opposed by an ethical concern for human rights. Whereas Middlemiss (1995) delves into the matter of political pork, Stone (2009) approaches the problematic nature of Canadian defence procurement as a condition of multiple accountability

lines among bureaucratic departments. Although neither of these two explicitly discuss decision making modelling, their work serves as an opening to approach the suboptimality of Canadian defence acquisitions as a product of a multiplayer process, where different institutions possess different ideas when it comes to purchasing military materiel.

To be elaborated in the following two chapters, the advantage of a model based study of Canadian military procurement is as follows.² First and foremost, a model based study will provide a clear structure for investigation and comparing case study results with a consistent criteria. To be used in this study, the bureaucratic politics model of decision making provides a unit of analysis (ie decision making), and a series of organizing concepts, otherwise known as

² A theory and a model share very similar elements in their definitions. A theory contains interrelated concepts and generalizations designed to generate a systematic understanding of regularities in behaviour. A model takes these abstractions and generates a representation of reality, drawing clear connections between a set of variables (Lunenborg and Irby 2008, 122-3).

An additional advantage to a model based study is clarifying whom and what to investigate. This does not mean theoretical and model based studies subtract the complexities of research and analysis. "A social science theory is a reasoned and precise speculation about the answer to a research question" (King, Keohane and Verba 1994, 19). Without a theory or a model, the task of determining what and whom to observe can become a greater challenge than observation itself. Acting as a guide, these tools help identify empirical data necessary to answer a research question. By focusing on specific independent variables (ie that which influences or causes the dependent variable), a study is permitted to cut through excess and unnecessary information that may obfuscate or obscure the quest to find an answer (Sodaro 2001, 57).

Without theory, one might look at all kinds of data that has no real bearing on answering the question at hand. Many dismiss theory as detached from the real world. However, as Michael Sodaro argues, "most individuals act in political life on the basis of certain assumptions and understandings about politics that are the equivalent of theoretical generalizations, even if they do not know it." (2001, 66) As Chava Frankfort-Nachmias and David Nachmias argue, many often incorrectly contrast "theory" with "practice", claiming that something is "all right in theory but won't work in practice" (Frankfort-Nachmias and Nachmias 2008, 33). This is specious reasoning. As Arnold Brecht notes, "When theory miscarries in practical trial it needs correction." (1959, 19) Theory relates to practice. Scientists accept a theory when the methodology (the practice) for using it is logically and explicitly mapped out. With this in mind, not only can social science theory provide a conceptual foundation for credible and reliable knowledge, it helps explain and predict the phenomena we seek to understand (Frankfort-Nachmias and Nachmias 2008, 33).

The label of theoretical approach is a merit based term. That is, it has gained wide acceptance because its explanatory prowess has been confirmed in repeated scientific investigations. This is not to say that theories are unchallengeable truths. Rather, they are valid so long as they remain consistent with the facts they seek to understand. In other words, a theory must be consistent with prior evidence about a research question. One would not apply a theory relating to crop pollination to answer a question about shark reproduction (Sodaro 2001, 64; King, Keohane and Verba 1994, 19).

ordering principles (ie decision participants, their positions, and how these positions are aggregated to yield outcomes). Second, this model helps avoid *a priori* judgement pertaining to blame. The bureaucratic politics model holds decision making processes as multi-player competitions for influence over outcomes, mitigating the tendency to evaluate a problematic outcome from the perspective that, for instance, politicians are solely responsible for mistakes. Primarily, the advantage of applying the bureaucratic politics model to Canadian military procurement is that, based on preliminary research, it provides a structure to answer the research question (ie *why do Canada's military procurement projects often fall short of their primary goals?*) The bureaucratic politics model will be defined and elaborated on in the following chapter.

CHAPTER 3—THE BUREAUCRATIC POLITICS MODEL

Fundamentally, this study is about decisions and the operationalization of those decisions. When the Canadian Armed Forces require new equipment, a number of different participants in Canada's policy making environment get involved. As Howlett, Ramesh, and Perl point out, decision making is not a mere technical exercise. Decision making is an inherently political process. Decisions "create 'winners' and 'losers'." (2009, 139) Preliminary research of Canadian defence procurement showed results consistent with the decision making process described in the bureaucratic politics model. This particular model provides a structure to organize my thoughts on the suboptimality found in the selected cases. That is, the prime minister, cabinet, the federal bureaucracy, and opposition politicians play a consistent role in affecting the outcome of defence acquisitions (see for example Plamondon 2010; Williams 2006). Interacting in the acquisition of materiel, participants shape decisions in meaningful ways, affecting outcomes to reflect the values of their institutions as well as their personal interests. Although participants no doubt believe they are acting on behalf of Canada's national interest, the way in which the national interest is perceived varies among participants, often leading to disagreement. Participants are *de facto* competing to affect the outcome of procurement decisions. The bureaucratic politics model addresses interactive competition in decision making and action taking (Allison and Halperin 1972, 43). As far as decision models are concerned, it does not stand alone. Like the bureaucratic politics model, some models describe how decisions are actually made. Others describe how decisions ought to be made.

Decision making has been a closely studied field among social scientists for many decades (Howlett, Ramesh, and Perl 2009, 139-59; Morgan 2017, 409-40). By the mid-1960s, two distinct models of decision making surfaced as primary contenders: the rational model and

the incremental model (Howlett, Ramesh, and Perl 2009, 143). Problems with the tautological³ nature of the rational actor model led Herbert Simon (1947; 1955; 1956; 1985; 1991; 1996), and later, Bryan Jones (1999; 2003), to develop bounded rationality, accounting for cognitive limitations through thickened models of choice. Between the 1940s and the 1960s, Simon was joined by James March, and Richard Cyert, in the Carnegie School of Organizational Decision-Making. This group questioned the validity of objective rationality as a function of human decision making (Morgan 2017, 416-22), examining choice with a host of other variables: incomplete information, human limitations, division of labour, standard practices, communication channels, loyalty, personal motivations and needs, uncertainty, as well as intergroup conflict (March, Simon, and Guetzkow 1958, 121-9).

Problems with the rational model also led to a second school of public policy decision-making theory, the incremental model (Howlett, Ramesh, and Perl 2009, 146). Portraying decisions as a process where “successive limited comparisons” are made to previous decisions, outcomes reflect choices familiar to the decision makers (Lindblom 1959, 78; 1979). Naturally occurring disagreement between decision participants leads to changes incrementally different from the status quo; emphasis is placed on feasibility over value maximization. Problematic is the insistence decisions reflect feudal avariciousness, where outcomes reveal near intransigence, essentially precluding optimality (Gortner, Mahler, and Nicholson 1987, 257; Gawthorp 1971). Problems with tautology—on the part of the rational model—and reliance on standard operating

³ Parsimonious rational choice is tautological because it cannot be falsified. The theory assumes that an outcome provides sufficient evidence of a specified approach (Kahler 1998, 927). Take the 1990-1991 Gulf War as a simple example. The United States defeated Iraq in this conflict. Since the United States won, we can infer that some degree of destruction of the Iraqi military was its goal. The choice to go to war can therefore be viewed as a value maximizing decision because it was the only way the United States could destroy the Iraqi military. Rational choice theory is consistent with any observation because it allows one to define agent preferences along a value maximizing criteria. The model is true only by virtue of its logical form. It does not say anything specific about how decisions are actually made.

procedures in place of innovation—as with the incremental model—led to further developments (Howlett, Ramesh, and Perl 2009, 149).

The mixed-scanning model was developed by Amitai Etzioni as a synthetic bridge between the rational model and incrementalism. Etzioni suggested decision making consists of two stages, a pre-decisional stage where specific options are discovered utilizing incrementalism, and an analytical phase in which options could be carefully evaluated in line with rational intentions (Etzioni 1967). Designed by US policy academics, the ‘poliheuristic’ model is similar to mixed-scanning in that it views decision makers as imperfect, utilizing heuristics to compensate for limitations in knowledge (Mintz and Geva 1997, 85; Mintz 2004, 4). Howlett, Ramesh, and Perl point out it is not exactly clear how these models really differ from the rational and incremental models they were designed to replace. Lindblom for instance, envisioned incrementalism as including limited option searches, with alternative selection based on detailed analysis. And of course, there is no way to ensure maximal decision making in line with the rational model (Howlett, Ramesh, and Perl 2009, 151).

Developed by James March, Johan Olsen, and Michael Cohen, the garbage-can model of decision making proceeds on the idea decision making is ambiguous and unpredictable. The garbage-can metaphor places both problems and solutions as bits of refuse discarded by policy participants. Depending on the issue, the players involved, and the speed of the decision making process, solutions and problems stick together in a somewhat non-rational and unpredictable way (Cohen, March, and Olsen 1976). This model was seen as more likely to occur during major policy transition, when commonly held beliefs were less clearly announced by participants (Hood 1999).

Carol Weiss applied an oyster metaphor to describe the decision accretion model of decision making. Decisions, Weiss argued, are taken piecemeal, without any structured plan. They appear like a pearl in an oyster, accreted in layers over a long period of time through the actions of multiple policy players (Weiss 1980). Unlike the standard operating procedures inherent to incrementalism, or the fortuitousness of garbage-can modelling, the accretion model relies on *ad hoc* re-structuralizations among a variety of participants, where *de novo* ideas can be examined. The downside is this process lacks the urgency with which decision making processes are often constrained (Howlett 2007, 675).

Morgan examines other concepts, such as the role of negotiation in resolving differences between players in a decision-making process (Raiffa 1982). Albert Hirschman's investigation of private firms, and other organizations, such as trade unions and political parties, addressed the role various individuals play in determining solutions to underperformance (1970). Thomas Schelling's work on segregation in residential communities used agent-based modelling to demonstrate that it is incorrect to assume "that the self-serving behavior of individuals should usually lead to collectively satisfactory results." (1978) Morgan also looks at the behavior of individuals in commercial organizations, citing Frederick Taylor's study of worker productivity ([1911] 1967), and Frederick Herzberg's study of worker satisfaction (1959). Morgan's central argument is decisions are often the result of "a complex interplay within organizations." (2017, 437) He acknowledges the sometimes-influential role individuals make, but expounds the point interactions among individuals and groups shape important outcomes.

Howlett, Ramesh, and Perl, as well as Morgan, sketch the evolution of decision based modelling, moving from rational decision-making towards models incorporating a variety of variables that affect decision outcomes, especially the interaction of players which opposes the

notion of unified deciding entities. The point that interactions among individuals and groups shape decisions is central to this study. In addition to capturing this interaction, my rationale for using the bureaucratic model is its consistency with preliminary research findings. And while the other models discussed above possess points that of course aid in the examination of political decision making, I find the bureaucratic model to be the most clear, utilizing a simple structure. Namely, the bureaucratic model tells us who is involved in decision processes (ie elected officials, public servants, military personnel, advocates, the press), what they generally want (ie to further personal and organizational ambitions), and how they generally interact to reach decisions (ie they interact competitively to assert ambitions on decision outcomes) (Allison and Halperin 1972). Addressed in the literature review, Canadian defence procurement is an interactive, multi-player process, characterized by an inherency for disagreement and ultimately, a competition for influence over outcomes (Williams 2006). This reflects the nature of the bureaucratic politics model.

The remainder of this chapter is comprised of two main sections (ie 3.1 and 3.2). The first section provides a brief review of the main literature that employs the bureaucratic politics model, beginning with some of the model's seminal texts, bridging more recent bureaucratic scholarship with a short explanation of the model in a Canadian context. The second section provides a final summary of the main points, followed by a careful definition of Allison and Halperin's version of the bureaucratic politics model (1972). To be discussed in the methodology chapter, this model provides a structure to organize findings on the cause of suboptimality found in the selected case studies.

3.1 – The bureaucratic politics model defined

Bureaucratic politics literature describes two basic iterations. One focuses on the bureaucratic elements of policy-making (eg Atkinson and Nossal 1981; Desrosiers and Lagasse 2009).

Applied in this study, the other addresses the spectrum of modern democratic politics, with all of its influential players, from elected officials to advocacy groups (eg Allison 1971; Allison and Halperin 1972; Kozak and Keagle 1988).⁴ The basic premise of this second iteration is that a variety of institutions and their individuals interact to affect policy outcomes. Since each of these institutions and individuals possess unique perspectives on the best outcome, the interaction is competitive, mainly characterized by disagreement over the potential outcome of a decision. The outcomes of the selected cases have varying combinations of suboptimal results.

As a reminder, suboptimal refers to the outcome of a decision in which the primary goals are not met. With defence procurement, this refers to goals relating to project schedule and cost. A project cancellation also qualifies as suboptimal. A project may be characterized as suboptimal even if, for instance, it meets its schedule but fails to meet its costing goals. Optimality however, refers to an outcome in which the primary project goals are met. Preliminary research of Canada's defence procurement has shown optimality to be rare in Major Crown Projects (Plamondon 2008; Perry 2017).

⁴ Nossal makes a crucial observation about the name and meaning attributed to the bureaucratic politics model. Namely, "nomenclature has muddled the model." (1984, 125). A recurrent criticism of the bureaucratic politics model is its ignorance of politics in policy making, focusing instead on the bureaucracy. "The criticism would be valid if Allison had intended that the focus be solely on the bureaucracy." (Nossal 1984, 125) However, Allison selected the term "A Governmental (Bureaucratic) Politics Paradigm." (Allison 1971, 162) As such, his expression of the model accounts for a wider array of players, even outside the bureaucracy and political executive (Allison 1971, 162-81). Although Allison and Halperin subsequently used "Bureaucratic Politics" (1972, 40), the proper focus of the model is on "players in positions" (Allison 1971, 165), which includes major and minor political figures, the bureaucracy, the military, spokespeople, and even the press. (Allison and Halperin 1972, 47; Allison 1971, 164-6)

Political scientist, Graham Allison, and former advisor to Richard Nixon, Morton Halperin, were instrumental in developing the bureaucratic politics model. There was of course previous political scholarship that inspired the construction of the model. As Allison acknowledges, his primary source was the model implicit in political scientist Richard Neustadt's work on presidential action (Allison 1969, 708). As Kozak and Keagle point out (1988, 4), even before Neustadt, scholars like American political scientist Woodrow Wilson, and German sociologist Max Weber, were developing organizational theory dealing with the policy process, primarily as a system where policy responsibilities were divided between politics and bureaucracy with minimal interaction between the two (Wilson 1887; Weber [1919] 2009). Kozak and Keagle note there was an evolution. Given the manner in which public policy unfolds in reality, Graham Allison, Morton Halperin, and Guy Peters enhanced decision making theory to an interactive, multiplayer process (Kozak and Keagle 1988, 3-13).

Neustadt's book, entitled *Presidential Power and the Modern Presidents*, was originally published in 1960. Thirty years later, Neustadt added five chapters to a second edition, updating his thoughts with contemporary examples of presidential leadership in policymaking. In writing this book, Neustadt's objective was to "characterize the power of a modern president." (1960, ix). His general conclusion was that presidential power is actually quite weak. That is, power as an output of influence on government action, is regulated by many institutions. Dependent on consent from other institutions and their actors, the president is forced to, not only share policymaking resources, but also bargain to strike deals with key policy makers. As a consequence of the American constitution, the president is in a difficult position to get exactly what he or she wants. President Harry Truman remarked in 1952, that if Dwight Eisenhower were to win the presidency later that year, he would "find it very frustrating... He'll say, 'Do

this! Do that!’ *And nothing will happen*. Poor Ike—it won’t be a bit like the Army.” (Neustadt 1960, 10 emphasis his) Neustadt does not lay a precise groundwork for the bureaucratic model. He does however, make an observation crucial to its construction: “Presidential power is the power to persuade.” (Neustadt 1960, 11) That is, the president is simply another gearwheel in the congressional mechanism. The success of his policy objectives depend on cooperation, and to a great extent, on the acquiescence of the bicameral legislature, the public bureaucracy, and a host of influencers from the media to Washington’s powerful policy advocates.

In 1969, Allison’s *Conceptual Models and the Cuban Missile Crisis* was published. Allison followed this article with two iterations of his book the *Essence of Decision: Explaining the Cuban Missile Crisis* (1971, 1999). In these works, Allison uses the rational actor model, the organizational process model, and the bureaucratic politics model to primarily examine why the Soviet Union placed strategic offensive missiles in Cuba, as well as why the United States responded with a naval quarantine of Soviet shipments to Cuba (1971, 1-9). He uses these models because it is impossible to describe the “full state of the world” leading up to an event. Analysts must therefore focus their attention on specific, relevant details that bear on the event in question (Allison 1969, 690).

Like Allison, Halperin’s 1974 book, *Bureaucratic Politics and Foreign Policy*, juxtaposes the bureaucratic politics model to the rational actor model. Acknowledging the rational model’s pervasiveness, and sufficiency in cases where interest and data are limited, Halperin argues that to develop a more detailed understanding of federal decision making in the US requires a careful look at the interplay of the various officials in government, including the president and his staff, the federal bureaucracy, Congress, and interest groups. In terms of foreign policy decision making, it is often necessary to include the views of military officials,

which Halperin lumps in with the bureaucracy (1974, 1-7). Halperin is making an important point consistent with constructivist theorizing. Instead of taking the overly simplistic view that politics is the result of carefully calculated, enumerated and value-maximizing decision processes, Halperin demonstrates the extent to which interpretations based on the conditioning familiar to certain countries, political parties, government departments, companies, and advocates, affects outcomes (1974, 312).

Allison and Halperin elaborate these points in a jointly written book chapter entitled, *Bureaucratic Politics: A Paradigm and Some Policy Implications* (1972, 40-79). Although the chapter is geared towards American foreign policy making, its clear structure makes it the ideal definition of the bureaucratic politics model. It is clear because the authors account for decisions and actions in two primary ways: the basic unit of analysis, and the organizing concepts (1972, 44-54). (This version of the bureaucratic politics model will be applied in this study, and will be defined later in this chapter.)

Kim Richard Nossal argues that although the bureaucratic model was made to examine the US political system, it is in no way confined to such case studies (1984, 120-7). Halperin acknowledges the model is concerned with the “motives, interests, and sources of power” that led a government to take a certain decision (1974, 313). The precise structure of a nation’s policymaking system matters less than determining player objectives and the effect of these on decision making interaction. Even a cursory glance at Canada’s parliamentary democracy demonstrates a web of institutions and individuals with different goals, interacting to influence decision outcomes in such a way that serves those goals (Nossal 1984, 120; also see Nossal 1979). “The basic premise of the model is that when different policy makers approach an issue, their objectives, their conception of the ‘best’ outcome, or their view of how best to achieve

those goals, will differ.” (Nossal 1984, 122-3) This lack of unanimity leads to decision interactions in which players often times clash, compete, and even devolve to a form of policy “combat” (Nossal 1984, 121-3). The bureaucratic politics model holds that competing interests exist within the state’s policymaking system. We must therefore discard the idea that the state, or government, is a “monolithic entity with a single, rational, identifiable interest.” (Nossal 1984, 123) Instead, policymaking participants will attempt to maximize their own conceptions of what best serves the nation-state; conceptions which are of course conditioned by parochial interests and the individual goals of personnel (Nossal 1984, 123).

The same as Allison’s model, decision making processes in a Canadian parliamentary context often cut across various jurisdictions, especially in an area as contentious as defence procurement. Bureaucratic politics assumes parochial concerns within these jurisdictions condition player ideology, forming the basis of player interpretations vis-à-vis the national interest. Ideology is what motivates organizations and their players to favour a particular outcome over various alternatives. Policy makers in the Canadian system are just as likely to differ over the best course of action for the nation. And the basis of these differences flow from how particular outcomes affect the status of participating organizations and their personnel. Regardless of differences in political structure, policy makers in the Canadian system are as likely to engage in bureaucratic politics as their American counterparts (Nossal 1979, 619; 1984, 123).

There is of course additional literature addressing the bureaucratic politics model. Most notably, Halperin and Clapp discuss the role of “essence” in determining an organization’s missions and capabilities. Essence is what defines an organization, and structures its vision, even determining the type of personnel required to set and pursue goals (Halperin and Clapp 2006,

27). Drawing from this literature, Desrosiers and Lagassé falsify the notion departmental synergy existed between DFAIT and DND, following the 2005 International Policy Statement. Essence is viewed as an aspect of organizational culture, continually reinforced through selection of familiar missions. Desrosiers and Lagassé note that Halperin and Clapp assert organizations are primarily concerned with defending and promoting their essence (2009, 661). DFAIT and DND feigned synergy, “seizing on a flexible concept”, known as failed and fragile states, to reinforce their respective departmental cultures via preferred missions (Desrosiers and Lagasse 2009, 675). Following the 2005 International Policy Statement, the two departments were supposed to work in near harmony. Instead, they adopted an overall mission that allowed them to continue with familiar missions, reifying their organizational culture. While DFAIT focused on development, DND ensured anything they did to assist DFAIT in this goal was complemented by a heavy combat role (eg Afghanistan). The idea is that bureaucratic departments will do whatever necessary to avoid relinquishing control of the policy area that defines their organization. Relevant to this study is Desrossier and Lagassé’s assertion the case vindicates Halperin and Clapp’s theory of bureaucratic politics (2009, 675). It maintains its relevancy, many years after it first appeared, and in more than an American political context.

Lai and Kang for instance, note the recent emergence of a powerful bureaucracy in Chinese foreign policy decision making. Although “top leaders” remain preeminent, a power hierarchy exists with the bureaucracy second and think tanks and public opinion following behind (Lai and Kang 2014, 312). This of course suggests an evolution in the Chinese political landscape; one in which the idiosyncrasies of an individual leader are checked—to a greater degree than in the past—by a host of other actors accessing power through less formal action channels. However, this could change with Xi Jinping’s recent tightening of his grip on Chinese

decision making (The Economist 2017, 11). Indeed, the bureaucratic model remains a stalwart for examining power relationships and hierarchy in government. Carpenter and Krause note both the role and distribution of authority is vital to determining policy outcomes (2014, 6). Smith's article on the US decision to invade Iraq in 2003 suggests higher echelons of the national security bureaucracy failed to properly challenge the idea of regime change. Instead, a core group of "highly placed officials with a pre-existing ideological commitment to getting rid of Saddam" dominated a somewhat hysterical post-9/11 era. There was very little competition at the top. Smith argues the bureaucratic politics model is less apt at addressing decisions in which multiple lines of advocacy are muted (2008, 103). Marsh's bureaucratic politics model based analysis of America's 2006 troop surge in Iraq showed the opposite. Marsh notes the prevalence of less prominent players, ones operating outside the Joint Chiefs of Staff, had considerable effect on the executive (2012). Taken together, these articles suggest the bureaucratic politics model possesses a timeless quality, recent scholarship serving as a testament to its robust utility.

This chapter has so far included a brief literature review of some of the more prominent approaches used to study organizational decision making. With the exception of the rational actor model, the prevailing point is decision making processes are generally characterized by the interaction of various groups and personnel. Equipped with a unit of analysis, and a set of organizing concepts, the bureaucratic politics model—as defined by Allison and Halperin (1972)—clearly exemplifies this basic point. In both American and Canadian contexts, the bureaucratic model holds that government decisions and actions are affected by various combinations of institutions and their personnel, depending on the policy issue. Different institutions/people have different perspectives on option selection. Therefore, the interaction in a decision process is generally competitive. In Canada, a decision process can involve the prime

minister, cabinet, opposition politicians, bureaucratic departments in the federal public service, companies, and advocates. Even the press, and provincial governments can participate in certain issues. The bureaucratic politics model argues these groups often disagree on decision options because interests differ among players. The next section includes a precise definition of the iteration of the bureaucratic politics model employed in this study.

3.2 – A model to inject structure and organize findings

It is my intention to determine whether the bureaucratic politics model is helpful in understanding why Canada's military procurement projects often fall short of their primary goals. (However, a careful distinction must be understood. I am not arguing the bureaucratic politics model is a precise blue print of the cases examined in this study.) Rather, preliminary research findings revealed a consistency between the model's tenets and the common factors attributing to problems with Canadian military acquisitions. Namely, military acquisition decision making processes commonly involve an interaction among a host of uniquely conditioned players leading to a competition to influence the outcome (Plamondon 2008; Nossal 2016). In following chapters, the bureaucratic model will organize case study findings. Results will test the utility of the model.

Canada's military acquisition projects begin with the very reasonable objective of purchasing, renewing, or updating essential military equipment. A nation cannot exist without a means to defend itself (Weber [1919] 2009, 1), and the right equipment is essential to that equation. What begins as a reasonable endeavor, often leads to an interaction in which a multitude of organizations and their personnel emerge to try and orient outcomes in their own favour. Flowing from organizational and personal interests, each of the players possess particular

opinions and conceptualizations of how best to satisfy the national and domestic interest. The kind of equipment purchased, how much it costs, where it is purchased from, and what it will do for the domestic economy, constitute major points of contention between governments and other elected officials. Public servants, advocates, and the provinces also interact, adding their unique interests wherever possible. The news media can also affect interactions by way of opinion pieces. The press is effective in capturing the opinions and decisions that shape events, as well as the events themselves. However, the effectiveness of opinion pieces in changing procurement decisions, even those by well-known authors, is difficult to measure. In any case, the bureaucratic politics model is designed to encompass this interaction.

Unlike the rational and incremental models, the bureaucratic model includes the entire range of organizations and individuals that populate the policy process. As Nossal argues:

Its starting point is an examination of what goes into the making of policy in a particular issue area. In other words, the bureaucratic politics perspective argues that a much clearer account of particular decisions can be derived from an examination of the process by which policy was made rather than an examination of outcomes alone. (Nossal 1995, 354)

The advantage to using the bureaucratic politics model is that it shows the complexity of decision making, with all of its complex institutions and complex individuals. The following blends Allison and Halperin's definition of the bureaucratic politics model (1972) with the Canadian governmental decision making context. Namely, Allison and Halperin's definition is placed within the context of Canada's parliamentary decision processes, as opposed to America's congressional context. (For clarity, and where appropriate, some of Allison and Halperin's Americanized examples will be included.) Also, a selection of more contemporary applications of the model are cited where appropriate. The bureaucratic politics model proceeds on the idea that when different players enter a decision process their conceptualization of an appropriate outcome and the method for achieving it differs. As described by Allison and Halperin, the

model accounts for this in two primary ways: the **basic unit of analysis**; and **organizing concepts** (1972, 44-56).

First, the **basic unit of analysis** is the decisions and actions of a government. Decisions and actions proceed through “action channels”, which are “regularized sets of procedures for producing particular classes of actions.” (Allison and Halperin 1972, 44-5; Marsh 2012, 415) For example, the action channel for procuring military materiel generally includes: a recommendation by the Canadian Armed Forces for a purchase to fulfill a prioritized need; funding approval obtained by DND; an approved Statement of Operational Requirements (SOR) by the military; the translation of the SOR into specs by the DND; a consultation between Public Services and Procurement Canada (PSPC), Innovation, Science, and Economic Development Canada (IC), DND, and private sector industry; the determination of a procurement strategy between PSPC, and DND; followed by final approval and the actualization of the purchase by PSPC, DND, and IC (Williams 2006, 3; Stone 2009, 105). This action channel represents an ideally smooth process occurring between the public service, the military, the elected government, and industry. Evidence suggests this is not always the case (Williams 2006; Nossal 2016). As Allison and Halperin point out, players on all sides apply pressure where it suits their interests (1972, 46). Similar to the United States, Canadian defence acquisitions contain a host of players outside the regularized action channel to which a procurement project resides (ie opposition politicians, companies, advocates, provinces, and the press). Even the interaction between senior bureaucratic and political leadership can be competitive (Allison and Halperin 1972, 48; Ellison 2006, 1261).

Second, the **organizing concepts** equal the players involved, the factors that determine their positions, and the means by which these positions are aggregated to yield decisions and actions (Allison and Halperin 1972, 46-7).

According to Allison and Halperin, decisions and actions are affected by both “senior players” and “junior players”. (1972, 47).⁵ Allison and Halperin have listed these two groups using American examples; I have simply translated them to fit the Canadian political landscape. Senior players are comprised of the prime minister, cabinet members, high-level public servants, and high-level military personnel. The term player can also be applied to organizations/institutions when a position reflects a unified consensus among the individuals within an organization (Allison and Halperin 1972, 47). Junior players consist of non-cabinet members of parliament, provincial premiers, policy advocates, corporate personnel, and the press (Allison and Halperin 1972, 47).

A player’s position is determined by the organization he or she represents and his or her personal interests, especially vis-à-vis their career. Allison and Halperin organize these interests under four headings: “national security interests, organizational interests, domestic interests, and personal interests.” (1972, 48; Desrosiers and Lagassé 2009, 660) National and domestic concerns are filtered through organizational and personal interests. Sometimes there is agreement on issues of, for instance, national security. Allison and Halperin apply the following example:

⁵ Allison’s 1971 publication of *Essence of Decision* lists the same senior and junior players, but refers to them as “Chiefs” and “Indians” (164). For obvious reasons, these references are outmoded. Allison (1969; 1971), and Allison and Halperin (1972) list senior players as the president and his “major political figures”, the heads of major national organizations, and even major military and security personnel. Junior players include members of Congress, the press, and interest groups, otherwise known as advocates or spokespeople (Allison and Halperin 1972, 47). I have included companies because defence acquisitions directly and indirectly include defence contractors. Allison and Halperin’s chapter was focused on foreign policy decisions where private firms do not generally play a major or direct role, except through advocates/lobbyists. I have included the provinces, because Nossal quite rightly points out the role they can sometimes play in Canadian decision making (1984, 124).

players might share the belief that if the US were to disarm unilaterally, other nations would apply military force against it. “But in most cases, reasonable men can disagree on how national security interests will be affected by a specific issue.” (Allison and Halperin 1972, 48) Members of an organization, especially career officials in politics or the public service, can come to believe the health of their organization is cardinal in protecting the national interest. In turn, the health of the organization depends on maintaining policy making influence vis-à-vis the application of the organizational mandate. This of course relies on maintaining organizational autonomy, morale, maintaining or expanding roles, and maintaining or increasing budgets (Peters 1981, 59). Senior bureaucrats, but especially politicians, have strong domestic interests. Whereas bureaucrats are agents of the public service, providing policy programs to a nation’s citizens, elected officials are at the constant mercy of voting behavior and opinion polls. However, senior military personnel typically seek state of the art equipment. Junior players such as advocacy group personnel are primarily concerned with their clients’ interests, but media personnel interested in maintaining or increasing their readership, will sometimes take appealing positions on policy issues, or focus on the controversial side of a story. This can have the effect of polemicizing a straightforward policy problem, possibly compelling senior players to adjust the tone or wording of their message, or even reverse a decision. Provinces get involved in defence procurement, attempting to steer outcomes to favour their parochial interests.⁶ In essence, a player’s stand on a policy issue depends greatly on role perception. When an issue arises, players will see different faces of the issue. As Allison succinctly put it, ‘where you stand on an issue depends on where you sit.’ (1969, 711; 1971, 176) The face a particular player sees

⁶ “In Canada, in the absence of a prohibition comparable to that in the United States constitution (Art. 1, sect. 10 prohibits the various states from engaging in foreign relations without the consent of Congress), there is a powerful incentive for the provincial governments to pursue their own parochial interests.” (Nossal 1984, 124)

determines how he/she will calculate and rank a particular outcome (Allison and Halperin 1972, 48-50).⁷

The means by which these positions are aggregated to yield a decision involves an interactive competition between the various players of the affected organizations. Different policy issues call for different mixes of players (eg environmental issues differ from defence procurement). Whatever mix of players involved, they “maneuver... to yield the desired result.” (Allison and Halperin 1972, 50; Smith 2008, 92) That is, they enter a “competitive” process to produce a decision that reflects the interests of their institution, as well as their personal interests (Lai and Kang 2014, 295; Carpenter and Krause 2014, 8; Bendor and Hammond 1992, 304; Rosati 1981, 237). Governing parties pursue outcomes advantageous to their popular standing. Opposition political parties purport to have better policy options than governments. Bureaucratic departments seek a decision that reflects the interests of their organizational mandate. Even departments that are only indirectly involved in a procurement project (ie the Parliamentary Budget Office and the Office of the Auditor General) will evaluate decisions from their organizational perspective. Military personnel seek the equipment they perceive necessary to carry out goals articulated by the civil authority, and remain competitive on the field of battle.

⁷ Since the end of the Cold War, defence procurement in Canada has been a multi-departmental enterprise. In 1993, Kim Campbell’s Progressive Conservative government merged the Department of Supply and Services with the Department of Public Works, forming Public Works and Government Services Canada. In 1996, the Department of Public Works and Government Services Canada Act passed, setting the legal authority for the new department. The Act established Public Works as a common service agency providing the Government of Canada with services in support of their programs, including the acquisition of goods and services. Renamed Public Services and Procurement Canada in 2015, the PSPC has the exclusive authority to purchase (defence) products required by DND. However, both PSPC and DND agreed to a division of responsibilities in which DND establishes the requirements in a defence acquisition, and PSPC is responsible for contracting and acquiring the required materiel. Innovation, Science, and Economic Development Canada administers Canada’s Industrial and Technological Benefits policy, which is designed to leverage industrial and economic benefits for Canada. The Treasury Board of Canada develops the government’s overall procurement policies, directives, and guidelines. It approves funding for major capital projects accepted by cabinet, and conducts financial oversight (Auger 2016, 7-8).

Like all elected officials, provincial premiers attempt to enhance their public image to further their grasp on political power by way of increasing the flow of industrial dollars in their province. Private industry contends for profit maximization through a robust business relationship with the government. Advocates push for influence in policy matters and the growth of their client base. The press might publish opinion pieces that reflect a sensational or controversial position. Individuals within these organizations contend for outcomes that develop personal interests such as career advancement.

In answering the research question—*why do Canada's military procurement projects often fall short of their primary goals?*—the bureaucratic politics model provides a structure to organize case study findings. The primary contention of this study is suboptimal outcomes in Canadian defence procurement are connected to the competitive interaction found in the bureaucratic politics model's **organizing concepts**.⁸ Outcomes based on the bureaucratic politics model are affected by an interaction among uniquely conditioned senior and junior players.

⁸ Allison and Halperin's chapter also includes a section addressing "constraints" (1972, 54-6). Referring to "organizational constraints" and "shared attitudes", this section "has been elaborated elsewhere... as an alternative model." (Allison and Halperin 1972, 54). Namely, Allison elaborates this section as the organizational process model in his various publications on the Cuban Missile Crisis (1969, 1971, 1999). Organizational constraints speaks to the standard operating procedures government institutions apply in performing their assigned functions. These organizational routines can limit the menu of acceptable alternatives in a decision process. Because standard operating procedures are "rarely tailored to the specific situation", they "are often ill-suited to" addressing new problems (Allison and Halperin 1972, 56). Shared attitudes "provide common answers to questions such as: Who are the actual or potential enemies of the United States? What are their intentions or capabilities? Who are our friends? What are their capabilities or intentions? What influences the behavior of other nations?" (Allison and Halperin 1972, 56) Establishing this kind of common ground can help mitigate conflict in a decision process, although it does not necessarily erase it. In other words, common ground can establish a more amicable and cooperative path in a decision making process, but specific answers addressing a final decision/action can remain contentious. In the Canadian context, political parties might agree on naval recapitalization without agreeing what the precise outcome would resemble.

CHAPTER 4—METHODOLOGY

To better understand why Canadian defence procurement projects often fall short of their goals, this study will investigate three cases of Canadian military procurement in Canada's tri-force military: the Tank Replacement Project; the Joint Support Ship Project; and the various projects to replace Canada's CF-18 fighter-jet interceptors. Each of these projects have experienced varying combinations of suboptimality (Perry 2017, 13). Although these projects do not share the exact same time lines, the bulk of their respective historical narratives occurred after the Cold War. Whereas the Tank Replacement Project began in 2006, the Joint Support Ship Project—vaguely conceived in the late 1980s—began in earnest in 2006 when the government issued a Request for Proposal. It continues to this day. Canada's involvement in the Joint Strike Fighter Project began in 1997 when the Liberal government authorized a US\$10 million commitment to the Concept Demonstration Phase. The project to replace Canada's CF-18s continues under a new Liberal government as the Future Fighter Capability Project.

The following chapter addresses the various methodologies that provide the structure necessary to answer the research question. This study is qualitative and comparative. The end of the chapter will address data collection and analysis.

The qualitative research tradition

In contrast to the quantitative research tradition, qualitative research does not rely on numerical measurements. Instead, it focuses on one or a small number of cases to provide a comprehensive account of an event or period of time (King, Keohane, and Verba 1994, 4). This study is qualitative. For several decades following the Second World War, these two traditions seemed to be at odds with each other; "indeed they sometimes seem to be at war." (King, Keohane, and

Verba 1994, 3) As King, Keohane, and Verba (KKV) point out, because of its use of cutting-edge statistical methods, some viewed the quantitative tradition as superior in providing general description predicated on specific instances (1994, 3).

In their seminal work, *Designing Social Inquiry*, KKV argue a qualitative research design is equally capable of moving from the specific to the general (1994, 218). This qualitative study seeks to draw general inferences about the factors that contribute to suboptimal results in Canadian defence procurement across the three cases in this study. It does not however, seek general inferences about all of Canadian defence procurement, from the birth of the nation to today.

As KKV argue, even a single case can provide a basis for generalized inferences, noting it is possible to increase our understanding of a phenomenon by applying the same theory to different cases, as long as these cases contain observable implications of the theory (1994, 217-23).⁹ What is essential in such research is reporting uncertainty. “All knowledge and all inference—in quantitative and qualitative research—is uncertain... All good social scientists—whether in quantitative or qualitative traditions—report estimates of the uncertainty of their inferences.” (King, Keohane, and Verba 1994, 31-2) I do not suggest that a precise cross-section

⁹ KKV’s point about “observable implications” ought not to be confused with Karl Popper’s “problem of induction.” (1959, 27) “Let scientists get their ideas in the bath rather than in the laboratory, from imagination rather than statistics.” (Hollis and Smith 1990, 53) Popper identifies inductive theorization as problematized by unfalsifiable corresponding hypotheses. A theory must be falsifiable for it to be considered part of the scientific epistemology (Popper 1959, 27-34). KKV are not promoting the idea of *post-hoc* theory building—where everything observed becomes part of the theory—or what Imre Lakatos refers to as the “protective belt”, which surrounds the “hard core” of a research program (Lakatos and Musgrave 1970, 132-8). Rather, they are describing the value of selecting cases that show uniformity with a selected theory. Continuing the bathtub metaphor, the notion that scientists can spend all of their time in the bath, completely unaffected by the images and memories of experience, is an impossibility that Popper acknowledges (Hollis and Smith 1990, 52). It is however possible to observe a given phenomenon, and select a theory that might develop a richer understanding of the relationships alive in that phenomenon. One can falsify a hypothesis without a need to discard the theory. And one can select a theory on the basis of *a priori* knowledge, without it amounting to an exercise in inductive theory building where corresponding hypotheses reflect the entirety of an empirical data set.

of Canadian military procurement can be drawn from three case studies. The point is to utilize the organized structure of the bureaucratic politics model to say as much as possible about the cause of suboptimal defence procurement among this study's empirical cases.

Structured, focused, comparison

Investigating three case studies using the same research question and theoretical approach makes this study a “structured, focused, comparison” (George and Bennett 2005, 67). To elaborate, structured refers to each case study being systematically compared with the same question and theory. Focused refers to only certain aspects of the historical cases being examined. The purpose of this comparative study is to assist the development of a general understanding across the selected cases using a single theoretical approach (George and Bennett 2005, 67). The strength of the comparative method is the flexibility it provides in selecting cases. Advertently selecting the Tank Replacement Project, the Joint Support Ship Project, and the Joint Strike Fighter Project/Future Fighter Capability Project, the object is to establish a general empirical relationship between decision making interaction and suboptimal outcomes in defence procurement. These three cases experienced varying suboptimal results. What was uncertain during the preliminary research stage was the degree to which these cases are better understood through the lens of the bureaucratic politics model. Each of these cases involve interaction between political, bureaucratic, industrial, and advocacy group players; news media played a role too. Measurement focused on the degree to which competitive interaction affected case outcomes (George and Bennett 2005, 69-72).

Two well-known and often used case selection approaches include the “most-similar” research design, and the “least-similar” research design (George and Bennett 2005, 81-2). This

study uses the most-similar design. The object with this approach is to control for as many variables as possible by comparing cases with as many commonalities as possible. The cases in this proposed study share several characteristics. They are all Canadian, public sector, military procurement projects. As previously mentioned, similar to David Perry's methodology, each of these cases involve costs exceeding \$100 million. Equally important, each case involves costs exceeding \$25,000, a factor that will be elaborated in a following paragraph. Each case spanned more than a single government mandate, and the primary bulk of their historical narratives occurred after the end of the Cold War.

That these projects are Canadian, controls for the type of political system in which they are taking place. In Canada, the use of public money to purchase goods and services must be conducted in accordance with statutes and regulations, internal agreements, as well as departmental policies, directives, procedures and guidelines (Public Services and Procurement Canada 2015). This makes public sector procurement different from private sector procurement. It would be challenging, though not impossible, to compare a government's purchase of weapons with that of a private firm.

The quantitative and qualitative outcomes of military acquisitions affect Canada's ability to fulfill its obligations to NORAD, NATO and the UN. Exogenous pressures are therefore taken into consideration by the government, bureaucracy and military, as well as domestic companies and advocates. Canada's Agreement on Internal Trade requires that goods above \$25,000 and services above \$100,000 "be acquired through a competitive process." (Williams 2006, 7-8) Since different rules apply to different dollar value thresholds, it would be complicated to compare the purchase of goods above the \$25,000 mark, with those below it. In essence, there is less pressure on the government to compete contracts when it comes to low dollar value

procurement. An acquisition lacking this pressure would likely change the nature of decision process interaction.

Canada's foreign and defence policy objectives began to shift following the end of the Cold War. In the 1990s, Canada shifted its defence focus away from the former Soviet Union, towards the ethnic conflicts, civil wars, and small regional disputes that erupted in the post-Cold War political vacuum (Axworthy 2003; Kasurak 2013). This shift affected procurement goals. Selecting the post-Cold War era will maintain a level of consistency unattainable in a study covering both the Cold War and post-Cold War periods. Although part of the objective is to see how different governments approached procurement, doing so over a vastly longer period of time would introduce variables that might change the comparability of the cases in this study. For instance, prior to the end of the Cold War, Public Services and Procurement Canada did not have the same legal status it currently holds. That is, in 1996 the government passed the *Department of Public Works and Government Services Act*, establishing Public Works and Government Services Canada as a common service agency supporting the acquisitions of government departments, boards, and agencies (Auger 2016, 7-8). Using cases with primarily post-Cold War timelines simplifies the process of comparison.

Unlike certain branches of the natural sciences, it is essentially impossible to control for all variables in a social science study. For instance, Canada's involvement in the War in Afghanistan began in 2001. As will be revealed with the Tank Replacement Project, the Afghanistan mission shifted aspects of Canada's procurement objectives away from those that dominated the 1990s. In addition, each case has a different mix of national and international procurement elements. For instance, whereas both the Tank Replacement Project and the Joint Strike Fighter Project include purchases from foreign companies and governments, the Joint

Support Ship Project deals with ostensibly domestic companies; that is, companies operating in Canada. At face value, it appears that such differences make comparison difficult. This is not true. What matters more than finding the most perfectly matched cases is being transparent about a study's shortcomings and reporting uncertainty in all findings. "All good social scientists—whether in the quantitative or the qualitative traditions—report estimates of the uncertainty of their inferences." (King, Keohane and Verba 1994, 32)

Each of the cases in this study are not exactly the same. But that is also part of the point. The idea is to find out what is similar despite certain dissimilarities. There are enough similarities to provide the consistency necessary to make generalized inferences. Paradoxically, what also makes these cases comparable are their dissimilarities. It would be scientifically useless to discuss two perfectly matched cases. A study about modern Canadian voting behaviour would not be very telling if it only included a group of Caucasian men sharing the same religion, levels of education and income. The point is to see what cases share in spite of their differences (Skocpol 1979).

Data collection and analysis

This study relies on a combination of primary and secondary sources. Primary sources include government documents, such as departmental reports accessed on corresponding government websites. To a lesser extent, other government documents were retrieved via Access to Information and Privacy requests. Primary sources also include news media, such as articles, columns, and editorials. Hansard was also used. Secondary sources are mainly peer-reviewed journal articles, scholarly books, and other rigorously assembled studies. The three cases in this

study were partly selected on the basis of available material, although this consideration was minor.

Archival research was conducted, although it bore little fruit. I made two separate trips to Library and Archives Canada, totaling six weeks. During these trips, I consulted with an archivist, and was able to retrieve a number of boxes, which I had hoped would provide useful information regarding the backgrounds of the selected case studies. The main problem with this approach was these cases are recent; all three are essentially ongoing. Most documentation related to recent and ongoing military procurement projects was simply unavailable because nothing had been cleared for archival use. The archives did provide some very embryonic background information which included things like memorandums between military personnel, and meeting notes about potential equipment purchases. For instance, I was able to find files discussing acquisitions of a number of items, from motorcycles, to mobile laundry units and armoured personnel carriers. Unfortunately, much of it was irrelevant to my research question. The other intent behind archival research was to collect background information to develop a better understanding of the procurement process, and provide historical context to the selected cases. Unfortunately, I was unsuccessful in this endeavor.

I also made several access to information requests in late 2015 and early 2016. Namely, I requested the “Statement of Operational Requirements” and the “Request for Proposal” for all three projects being examined in this study. I did receive a heavily redacted Statement of Operational Requirements for the Joint Strike Fighter Project. I also received the tank replacement’s Statement of Operational Requirements from 1987. I am still waiting for the other requested documents.

The use of interviews was given serious consideration, but I chose not to pursue this route because in order to generate useful questions, I first needed to identify the players in each of the processes, and gain a solid command of the specific case narratives. By the time I had conducted enough research to identify the relevant players and the chronology of events for each case, I was satisfied with the level and quantity of information I had accumulated as far as answering the research question. Should I pursue publication of this study, I believe interviews would be a useful addition. As it stands, the study has sufficient results to provide analysis pertaining to the research question.

Government documents, such as departmental reports, played a very useful role in this study. Primarily, reports by the Parliamentary Budget Officer and the Office of the Auditor General were useful in informing the general narrative of the selected cases. More importantly, they demonstrated the role these government departments played in the decision processes of each procurement project.

The majority of the information I gathered to develop the history of each case came from journalistic sources in primarily Canadian news-media outlets.¹⁰ To do this in a systematic way, I

¹⁰ In this study, news-media is both a “player” according to the bureaucratic politics model, and a source of information used to create the historical narrative of each case. This is not a problem. Canadian newspapers have a solid reputation for providing well-sourced, unbiased journalism, making them an acceptable primary source of record. This study uses trusted dailies employing credible journalists. Primary journalists include, but are not limited to, Murray Brewster, David Pugliese, Lee Berthiaume, Andrew Coyne, and John Ivison. The advantage to using articles by prominent Canadian journalists is these professionals have unique priority access to government decisions, mainly via press releases, interviews and media scrums on Parliament Hill, and leaked documents. In addition, these articles often provide a holistic political narrative, illustrating key background information to procurement related news. Although the tone of these articles is not always positive, this is expected, given the tendency for procurement projects to fall into the realm of schedule slippage and cost-overruns. There is often little reason to celebrate Canadian defence procurement as an example of efficiency. It is however, possible to separate negative tone from historical fact by cross-referencing information.

Articles used often appear in more than one newspaper and I have cross-referenced them with other articles on the same topic. (However, that does not mean I always cite every single article on a single topic. For instance, *Canwest News* may publish a nearly identical article—by the same author—in all of its dailies. Citing the exact same article from different newspapers would be redundant. I generally selected the article with the most

used the University of Calgary's newspaper database. The specific database I relied on was "Canadian Newsstream". This database provides "access to the full text of nearly 300 newspapers from Canada's leading publishers, including *The Globe and Mail*." In addition to newspaper articles, Canadian Newsstream provides columns, editorials, and features as far back as the late 1970s. Content is updated daily.

The systematic nature of my news-based research is as follows. To answer the research question, and its relationship to the bureaucratic politics model, I sought out information that would capture the interactions of key players in each of the related procurement processes. Using Canadian Newsstream, I approached this task chronologically. For each case study, I used a mix of primary source (eg government documents) and secondary source (eg peer-reviewed journal articles and scholarly books) documents to form a starting point in the chronological narrative of each case. I then developed keyword search terms that I entered into the Canadian Newsstream database. To capture as many articles as possible, I kept my keywords fairly generic. As one example, with the Tank Replacement Project I used "Leopard tank refurbishment" as my keywords. I then used these keywords to search the database, year by year. Some years produced well over 1000 articles. Other years produced considerably less material, although the success of my applied keyword combinations ensured I was always able to find a rough minimum of 100 articles for each investigated year. (If a keyword did not work, I would experiment with other combinations until I found something fruitful.) As I scanned the search results, I would open and read articles that matched what I was looking for. If an article seemed useful, I would save it in a

information or words.)

As for columns and editorials, these sources do contain bias and political ideology, and in certain cases, they will reflect the position of a uniquely conditioned policy player. Wherever relevant, columns and editorials will be addressed as players. Historical record is substantiated by news articles addressing the same topic. Wherever possible, names of authors are provided and their opinions are dealt with as opinions.

file corresponding to the case and the particular year. I would then read all of the saved articles, taking hand written notes as I progressed. After reviewing my notes, I was then able to combine my news-based research with other documents, adding paragraphs to each particular chapter.

The secondary sources used in this study came from academics published in peer-reviewed journals and scholarly books, as well as articles and studies produced by think tanks. As indicated in this study's literature review, Canadian defence procurement is a growing area of scholarly inquiry. As such, a host of secondary sources were available to use as background information and useful baselines for comparing historical findings.

Since preliminary findings indicated each of the three cases selected for this study contained varying degrees of suboptimality, optimal results play a minor role in the final analysis. Whereas a suboptimal result fails to meet one or more of the primary goals of a project, an optimal outcome meets all of its primary goals. As mentioned, this study looks at the decision making processes of three specific procurement projects. The suboptimal aspect relates to the outcomes of the processes. That is, did the projects meet their primary goals? Discussed previously, none of these projects have met all of their primary goals. Sometimes, some goals were met, but a project does not qualify as optimal for meeting one or two of its goals. A project must achieve all of its goals to be considered optimal. Goals related to schedule and cost must be met. Assuming the military actually requires a particular piece of equipment, cancellation is prohibitively suboptimal. As will be argued in the forthcoming chapters, each of the selected cases reflect actual materiel needs of the Canadian Armed Forces. Results are analyzed at the end of each case study chapter through the lens of the bureaucratic politics model.

Each of the three cases made some contribution to answering the research question. The variables derived from the bureaucratic politics model provide a clear structure to discover case

facts necessary for answering the research question, as well as determining the extent to which the bureaucratic politics model assists in that exercise (for more on data collection and analysis see Azevedo et al. 2011; Kallet 2004).

The conclusion addresses these results holistically. It relates similarities and examines contrasts. The overall objective is to answer the research question, make generalizations among the three cases, and provide insight on the utility of the bureaucratic politics model.

Conclusion

This chapter has addressed the methodological aspects employed in the pursuit of answering why Canadian defence procurement projects fall short of their goals. Like its quantitative counterpart, the qualitative research tradition is capable of providing general phenomenological descriptions from specific instances. Three case studies do not provide the final word on Canadian defence procurement. This however, is not the point of this study. The objective is to draw a general inference about the players and factors that contribute to suboptimal results in Canadian defence procurement for the selected cases. Structured, focused, comparison addresses the fact each of the cases are tasked with answering the same research question, using the same theoretically derived model. Finally, this study uses a mixture of primary and secondary sources to provide detailed accounts of three Canadian procurement projects. Corresponding analysis tests the bureaucratic model against the historical detail, providing an answer to the research question.

CHAPTER 5—THE TANK REPLACEMENT PROJECT

A mobile gun system is the right vehicle for Canada's army and will provide an excellent capability on Canadian Forces operations... We are losing a millstone that has hamstrung our thinking for years. (Pugliese 2006)

Speaking at a 29 October 2003 Ottawa press conference, Lieutenant-General Rick Hillier was joined by Liberal Minister of Defence John McCallum to announce the retirement of the Leopard 1 main battle tank. Old, heavy armour “thinking” was to be replaced with new, “high-tech”, light-armoured maneuverability. It was to be an evolution in Canada’s ability to deploy armoured forces abroad as well as exploit tactical opportunities in the changing landscape of non-traditional military engagements. Front and centre was the fight against the guerilla tactics of the Taliban in Afghanistan (Stephenson 2016, 11).

Not to mention the fact that Hillier cut-his-teeth as an armoured officer, his preference for the American made Stryker Mobile Gun System (MGS) was highly controversial among both politicians and military officers. Hillier envisioned the MGS working in conjunction with the high-tech, Multi-Mission Effects Vehicle (MMEV). Modelled on the existing air defence missile system known as ADATS, the MMEV would be capable of shooting down aircraft or destroying ground targets. The \$3 billion earmarked for the MGS and MMEV—a price that included long-term maintenance contracts—was characterized as an investment necessary to make the Canadian Army a force that could be rapidly deployed and capable of moving quickly on the field of battle. Hillier maintained that tanks were both slow to deploy and difficult to maneuver in places like Kabul (Pugliese 2006). His opposition countered that, armed with rocket-propelled grenades and roadside bombs, Afghanistan’s insurgents were proving a formidable foe, knocking out lightly armoured vehicles with ease. Some Canadian commanders argued fielding vehicles with better protection was both the way of the past and the way of the future. Retired brigadier general Jim Hanson for instance, ridiculed the idea of purchasing the MGS, referring to it as

“insanity” (Pugliese 2006). To Hillier, warfare had changed. The Canadian Forces were no longer looking down the barrel of a Russian invasion of western-Europe. Hillier argued:

Tanks are a perfect example of extremely expensive systems that sit in Canada because they are inappropriate to the operations we conduct daily around the world... The MGS, in conjunction with other combat systems, will give us a much greater capability on operations such as those being conducted in Kabul, and still give us options for high-intensity combat. (Pugliese 2006)

The inclusion of tanks in warfare has held a controversial place in the theorization of army tactics. Undeveloped engineering, and extremely cumbersome relative to horseback, their place in the First World War was questioned at first. As technology improved however, tanks found a place far from anything considered a “millstone around the neck” of the Canadian Army. From the Second World War to the end of the Cold War, the main battle tank was an important, if not essential instrument to Canada’s soldiers.

The past: the main battle tank has been an asset to the Canadian Army

Initially conceived as a “land-cruiser” or “land-ship” to confront the powerful machine gun, the Mark I tank was unsuccessful at its debut by the British during the Battle of the Somme in September 1916. (Nicholson 1962, 167-8). The twenty-eight ton hunk of steel powered by a six-cylinder, 105-horsepower engine was slow, prone to mechanical failures, easily destroyed by artillery fire, and greatly challenged by soft or heavily cratered ground. There was however, a positive side to using the tank. The Canadian Corps employed six tanks at the Battle of Flers-Courcelette. Although all six were either knocked out or broke down during the battle, they provided extra firepower, rolled over barbed wire, and their unfamiliarity perhaps “encouraged many Germans to surrender” (Nicholson 1962, 169). Though tank warfare was in an embryonic stage, the art of armoured operations developed through the course of the war. Allied tanks became faster, more reliable, and more successful as tactics improved and quantity matched

demand in 1918. With the Mark V as the standard fighting tank of British forces, the Allies possessed 604 armoured vehicles, many of which proved successful during the opening stages of the Battle of Amiens in August 1918 (Nicholson 1962, 393-413). Far from a decisive weapon of the First World War, the tank was valuable when combined with artillery and mortars, infantry and machine guns, as well as tactical air power.

The interwar period saw a proliferation of tank warfare theory. Commanders such as JFC Fuller, BH Liddell Hart, Charles de Gaulle, George Patton, Gregory Zhukov, and Heinz Guderian (Reid 1978) were instrumental in developing the idea that independent armoured units and formations could perform exceptional strategic penetrations, even while some national governments were reticent to provide the financial support to bring theory to life (Kier 1997). Although many of these thinkers did not agree on the precise form mechanized warfare would assume, they agreed the speed, mobility, and firepower of the tank made it an essential component in emerging doctrine, and that it would greatly change the nature of combat (Reid 1978, 302-3). However, hamstrung by French opposition to military involvement overseas and his desire to reunite Canada, spending on the latest armoured technology was not a priority for Prime Minister William Lyon Mackenzie King. King understood a large defence budget would give the impression of an insidious plan for more war and more conscription (Neatby 1969; Granatstein 1977, 129-30).

Adolf Hitler's 1933 inauguration as German Chancellor made the grim specter of another war in Europe easier to imagine. Written by Colonel HH Matthews, the original draft of Defence Scheme No 3 dealt with "the organization, mobilization and despatch of a Canadian Expeditionary Force to a trans-oceanic theatre of war." (Eayrs 1964, 84) Between 1934 and 1938, Canada's defence budget increased sharply, from \$14 million to \$35 million (Statistics

Canada 2014). With the 1936 reorganization of the Canadian militia emerged the age of armour in the Canadian Army (Stephenson 2016, 10). Four Militia cavalry regiments were converted to armoured car units. Six infantry regiments were converted to tank units. The Permanent Force Tank School was established in London, Ontario. In 1938, the school was moved to Camp Borden, placed under the command of Captain FF Worthington, and renamed the Canadian Armoured Fighting Vehicle School (Hammond 2000, 100; also see Thomas 1953). And officer written articles published in Canadian Defence Quarterly greatly expanded armoured tactical knowledge in the Canadian Army before the Second World War. Despite all six tank regiments lacking tanks until 1938 when two Mark VI Bs arrived, Canadian officers were developing the scientific and artistic creativity required to make a meaningful and effective contribution in the forthcoming war (Hammond 2000, 101).

Then the war came, and what was initially conceived by Fuller¹¹ twenty years before, became known as “Blitzkrieg” (Fuller 1998, 139). Blitzkrieg combined the speed and firepower of air, artillery, mechanized infantry, and armour, to breakthrough a thinly guarded defensive position and drive deep behind the enemy front to disable logistics and communications (Luttwak 1987, 99-106). Germany did a remarkable job employing this tactic in Poland and France, but this was just the beginning. Tanks, “again and again, proved themselves to be the decisive land weapon” of the Second World War (Fuller 1998, 148), and Canadian success was no exception. In the Italian campaign, the 1 Canadian Armoured Brigade was effective in exploiting German disorganization during rapid advances to the Gothic Line following the fall of

¹¹ Before the Battle of Cambrai in late 1917, as a staff officer with the British Tank Corps, JFC Fuller was intent on devising a way to plant machine gunners behind enemy positions. Special tanks were designed for this purpose. In preparing for the 1919 campaign—which of course never materialized—France’s Marshal Ferdinand Foch approved a plan by Fuller to use overwhelming tank and air power to penetrate enemy frontlines, and attack the command and supply system (Fuller 1998, 139).

Rome (Nicholson 1956, 458-65). In Normandy, Lieutenant-General Guy Simmonds—commanding the 2 Canadian Corps—ordered the conversion of Priest self-propelled guns into personnel carriers so infantry were better able to keep pace with the 4 Canadian Armoured Division and 2 Canadian Armoured Brigade during the capture of the French town of Falaise. The result was a stunning success of Canadian armour combined with armoured infantry (Holmes 2011, 56-7; Stacey 1966, 209-10, 259-60).

With the end of the Second World War, Prime Minister Mackenzie King was intent on greatly reducing the size of Canada's military, both in terms of personnel and budget. While the military began planning for another major war and peacetime conscription, King and his Minister of Defence Brooke Claxton shrank the military and prioritized social welfare over military acquisitions. However, communist North Korea's 25 June 1950 invasion of South Korea would prove a dramatic test of Canada's ability to rearm and redeploy (Granatstein 2011, 315-20). Initially hesitant to send ground troops to assist the United Nations force in Korea, Prime Minister Louis St Laurent eventually augmented Canada's contribution of three naval destroyers and air force transport squadron with a brigade group under Brigadier-General John Rockingham (Granatstein 2011, 320; Johnston 2003, 28). Rockingham made sure his brigade was prepared for the hilly Korean terrain through proper training, and by exchanging his tank squadron's M10 tank destroyers with Sherman tanks (Johnston 2003, 111). Explained by Rockingham, the M-10's open turret made an easy target for enemy mortar and artillery fire. Army Headquarters in Ottawa granted permission to purchase either Centurions, Pattons or Shermans. Reliable and able to handle the steep gradients of the rugged Korean hillsides, the M4A3 Sherman was highly recommended by the 1 US Marine Division. By 17 May 1951, preparing to head to the front,

Canada's C Squadron collected twenty Sherman battle tanks from the American ordnance depot in Pusan (Johnston 2003, 111-2).

In 1951, at a cost of about \$17 million (\$88,000-\$115,000 per tank), Canada began outfitting its two armoured regiments with British Centurions, a process that was finalized in late 1954 (Globe and Mail 1951; 1952 and 1954). Although the Centurion was considered state-of-the-art in the early 1950s, armoured doctrinal thought began to view heavy concentrations of main battle tanks as good targets for atomic shells—an expensive liability (Globe and Mail 1954). Alongside this concern was an emerging debate over heavily armoured assault tanks versus light armour for reconnaissance and exploitation (Barclay 1953, 42-51). Canada augmented its Centurions with the 1965 debut of 1,200 M113s—a fully tracked armored personnel carrier¹² (Storey 2011). Under Prime Minister Pierre Elliot Trudeau, a white paper entitled *Defence in the 1970s*, emphasized “adequate mobility”, as opposed to a major participant of NATO's armoured role in the European theatre. Liberal cabinet reasoned that since tanks were not required at home, there was little reason to make them available for Canada's missions abroad. Replacing the Centurion with 100 Scorpion reconnaissance vehicles (Globe and Mail 1972) was set aside when NATO officials argued Scorpions, or other light armoured

¹² The M113 speaks to a long-standing issue in defining Canadian armoured doctrine: affordability and transportability versus operational capability. Requiring a light and transportable armoured vehicle for the European battlefield, the Canadian Army procured “1200 M113A1/A2 infantry command post, mortar carrier, armoured engineer, air-defence/anti-tank (ADATS), and tank-destroyer variants” (Rudd 1995, 8). First purchased in 1970, ownership of a family of Light Armoured Vehicles (LAV)—namely, the Grizzly APC, the Husky armoured recovery vehicle, and the Cougar tank-trainer/fire support vehicle—provided commonality and therefore lower operations and maintenance costs to the Canadian Army. However, these vehicles did not possess the paradoxical robustness required in a light-weight, combat capable vehicle. Not to mention the underwhelming nature of the LAV family, by 1995, the M113 was thirty years old and needed replacement. Chrétien's Liberal government announced \$800 million for a new fleet of Armoured Personnel Carriers, built by the Diesel Division of General Motors in London, Ontario (Rudd 1995, 7- 8).

vehicles, would render the Canadian Battle Group in Europe “tactically impotent” (Stevenson 1975).

Recognizing the importance of the battle tank, in 1975, Minister of National Defence James Richardson, began weighing options for replacing the aging Centurions. Refurbishing the Centurion was going to cost around \$16 million (Best 1974). The other option was purchasing a new tank, such as the Leopard 1A3. As argued by Chief of the Defence Staff, General Jacques A Dextraze, the advantage of retrofitting the Centurion was price, as well as provision of a stopgap measure until the modern Leopard 2, XM-1 was made available in 1985 (Best 1974; Dangerfield 1979, 51). Although refurbishing the Centurions appeared the more sensible option, Trudeau opted to purchase the Leopard 1A3. The matter was approved by cabinet in November 1975 (Dangerfield 1979, 50).

Reconfigured specifically to fit Canadian requirements, the 1A3 became the Leopard C1. At the time of purchase, it was still the most modern tank in the Western world. It therefore satisfied Germany’s interest in having “a fully credible Canadian ground force commitment in Central Europe” (Rempel and Bleek 2000, 88). European defence however, was not Trudeau’s source of motivation. In the wake of the 1971 “Nixon Shocks”, the prime minister was seeking a wider menu of countries interested in trading with Canada. German Chancellor Helmut Schmidt offered to support Trudeau’s bid for closer economic ties with Europe, on the condition Canada commit to a pro-NATO defence policy. Canada’s 1976 signing of a contractual trade link with the European Community was followed by its purchase of 128 Leopards from Krauss-Maffei of West Germany (Rempel and Bleek 2000, 87-91).

By the mid-1980s, new tanks were not only more sophisticated, they were larger and heavier, relegating the Leopard 1 to the status of a medium tank. And this fact was made clear in the 1987 statement of requirement for a new main battle tank.

The Leopard C1 is based on early 1960's technology and was designed to defeat the Soviet T55 and T62 tanks. The introduction of the T64, T72 and T80 tanks with 125mm smooth bore guns and improved conventional and reactive armour has made the Leopard C1 obsolescent as a Main Battle Tank in terms of firepower and protection/survivability. (Department of National Defence 1987, 4)

Soviet tanks were viewed as capable of destroying Canada's Leopards at a distance of 4000 meters. The 105mm Leopard gun was incapable of penetrating Soviet armour at even close range. Canada's role in Europe aside, there simply was no alternative to the main battle tank (Department of National Defence 1987, 4).

Winning the 1993 federal election, Chrétien's Liberals inherited a \$40 billion deficit and 1.4 million unemployed (Morton 2006, 361). Replacing the aging Leopard with a new main battle tank was not a top priority. In fact, the prime minister was under considerable pressure from advocacy groups like the Canada 21 Council to shed heavy armour and other Cold War military instruments in favour of equipment more suited to peacekeeping (Head 1994, 63-4). A Special Joint Committee of the Senate and House of Commons conducted a review of defence policy through a series of cross-country meetings. The report that emerged concluded the day of the mass army was over, any future force structure had to be affordable; Canada's Leopards should be modernized as opposed to replaced (Special Joint Committee of the Senate and the House of Commons 1994, 19, 39). Although the 1994 White Paper on Defence neglected to mention what the Liberals intended to do about the Leopard C1s, in late November 1999, a newly refurbished Leopard tank was unveiled at Canadian Forces Base, Gagetown. Canada

purchased German surplus Leopard 1 tanks to be cannibalized for parts. Unique Canadian equipment such as radios and global positioning systems were mounted. Refurbished turrets were installed on the existing Canadian tank chassis'. The Leopard C1 was renamed the C2 (Pugliese 1999).

Despite the relatively low cost of the project, some considered it a waste of scarce military dollars. Bill Robinson, a defence analyst with the disarmament group, Project Ploughshares, noted the refurbished Leopards reflected Cold War thinking, where Canadian tank crews would square-off against Soviet T-72s. Robinson argued that day had passed for good. Partly in agreement, David Rudd, executive director of the Canadian Institute of Strategic Studies, argued, not only is the Leopard C2 outgunned by the T-72, the refurbishment project arrived when other countries were already transitioning to lightly armoured forces, adopting equipment the Canadian military already had (Pugliese 1999).

Three years prior, in a March 1996 paper, Lieutenant-General Maurice Baril made a similar argument. He wrote a heavy, mechanized army "is impractical and unaffordable in our current geopolitical and fiscal circumstances." (Canadian Press 1996) He acknowledged the primacy of the main battle tank in scenarios like Desert Storm, but viewed the proposal to refurbish the Leopard as delaying the inevitable: "We're not going to let go of our Leopards until we have a direct-fire combat vehicle... We'll get out of the tank business when we have a replacement." (Pugliese 1999). Just one year later, as Chief of the Defence Staff, Baril appeared to accept the Liberal's plans to follow through with refurbishment, still insisting heavy mechanization would not last indefinitely. At a November 18, 1997 Standing Committee on National Defence, Baril mentioned the refurbishment would give the army "state of the art" until

2010, providing time to determine “what would be needed beyond 2010 on the battlefield from a tank point of view.”

The Leopard refurbishment was a stopgap measure. Even if it was unintentional, the refurbished Leopards at least allowed the Canadian army to continue training with heavier mechanized equipment, while taking time to consider a range of options. If not for September 11, 2001, and the ensuing mission in Afghanistan, Baril might have been right about the Leopard providing “state of the art” until 2010. One of his successors, Rick Hillier, agreed the battle tank was obsolete (Campion-Smith 2003). To their mutual discredit, even the asymmetrical warfare in Afghanistan provided a role for the battle tank. Far from a “millstone”, the battle tank remained an asset to Canadian forces operations.

The project: Afghanistan and canceled refurbishments

When Hillier made his October 2003 announcement Canada was retiring the Leopard C2s, he recommended the purchase of General Dynamics’ Stryker Mobile Gun System (MGS) vehicle. Sixty-six, twenty-three ton MGS’ were to replace 115, forty-two ton Leopard C2s. Similar to Canada’s LAV IIIs, the MGS is wheeled and lightly armed, but is equipped with a larger 105mm cannon. At \$600 million, the Stryker purchase was to be a fraction of the cost of a new battle tank. However, controversy surrounded the issue and the recommendation was not followed (Taylor 2003).

At the time of the announcement, Hillier was Chief of the Land Staff and earlier that year Canada agreed to a twelve-month leadership role of the ISAF mission in Kabul, Afghanistan, beginning in the summer of 2003 (Gross Stein and Lang 2007, 70-1). Under President George W Bush, the US had just invaded Iraq in March. Although the main battle tank played the key

armoured role in the invasion, the US Army was prepared to order 2,100 of the Stryker vehicles from GM Defence in London, Ontario, and General Dynamics Land Systems in Michigan. For the US, the Stryker was not to replace their tanks, but to equip a light armoured division that could be rapidly deployed in ninety-six hours, to anywhere in the world. These light divisions would then hold the line until heavier armour arrived (Taylor 2003).

Almost immediately following the 2003 announcement, Minister of National Defence, John McCallum, was defending the MGS in relation to a 1998 US army study sighting deficiencies in the Stryker. In the House of Commons, McCallum argued the Stryker was specifically requested by Canadian troops. However, US testing revealed problems with the main armament, which crushed the auto-loader when the barrel slammed back after firing. A cramped cabin combined with terrible conditions in desert heat generated questions why soldiers would request it at all (Taylor 2003).

McCallum and Hillier provided a united front on the matter. McCallum, argued by “piggybacking” on the American order, Canada would receive the vehicle at a reduced cost, with very little risk, and in a short period of time (Campion-Smith 2003). However, Ben Works, director of the Washington-based Strategic Issue Research Institute, called the MGS a “boondoggle”, asking why the price quoted to Canada was thirty percent higher than that quoted to the US (Taylor 2003). Clearly, the MGS was contentious.

From the military perspective, Hillier argued the MGS had improved since 1998, and was the way forward in terms of ability to deploy and ability to move on the battlefield:

The strong qualities of a Leopard tank parked in Valcartier or Edmonton or elsewhere are useless to our soldiers in Kabul... In some cases, we can't get it there because the only aircraft that can fly in are the C-130s and it's too heavy for that. In other places, it cannot maneuver and I give you the streets of Kabul, as an example of that. (Pugliese 2003)

Alan Williams, the Assistant Deputy Minister of Defence (Matériel), noted in a May 2003 briefing note “The MGS continues to encounter technical faults that have not been satisfactorily resolved... Canada would be ill advised to accept delivery of MGS until the technical faults” are corrected (Edmonton Journal 2003).

Another damaging report emerged in January 2004. In addition to continuing technical problems with the MGS, Canadian tactical planners concluded the main battle tank was crucial to American success in Iraq (Taylor 2004). In a January 2004 op-ed, Hillier admitted Abrams tanks spearheaded the American drive into Iraq. However, he argued the US Marine Corps (USMC) use of light armour in the invasion was successful because it was supplemented by various air and ground systems. Hillier implied Canada’s use of the MGS would reflect the Marines’ experience in Iraq. Scott Taylor, publisher of military magazine *Esprit de Corps*, wrote a column responding to Hillier’s op-ed. Taylor noted the various air and ground systems available to the USMC were helicopter gunships and fleets of seventy ton main battle tanks, “none of which Canada has any plans to ever acquire.” (2004) Taylor also noted transportation of the Stryker MGS was an additional problem. Lacking an upgraded Hercules strategic airlift plane, let alone strategic sealift capabilities, Taylor wondered how Hillier conceived of the MGS as capable of “rapid deployment” (Hillier 2004).

Referring to critics of the MGS as “armchair strategists”, Hillier’s op-ed was dismissive. It also reflected Hillier’s ability to navigate the political side of the Ottawa policy world; the lieutenant-general had an answer for everything. The MGS would be protected by air and ground systems; transportation slack would somehow be remedied (perhaps picked up by the Americans); and weak armour, susceptible to rocket propelled grenades, would be reinforced (Hillier 2004). Taylor was not convinced. He questioned Hillier’s rationale for a deficient,

twenty-three ton MGS instead of a battle-tested, seventy ton main battle tank. Taylor was on the mark. Unless Hillier knew something everyone else did not, there was no clear rationale to justify purchasing the MGS. However, as it would turn out, the reality on the ground in Afghanistan would do more to determine the outcome.

When Hillier was appointed Chief of the Defence Staff (CDS) in February 2005, Prime Minister Paul Martin was eager to distinguish his government from Chrétien's.¹³ Hillier had spent six months leading ISAF in Kabul (ie 9 February-12 August 2004). When he returned, he articulated a unique vision for Canada's place in the world. In a document known as Canada's International Policy Statement, the new CDS argued the Soviet military threat had been replaced "by new and more complex threats" such as "Failed and failing states... civil wars, humanitarian catastrophes and regional instability." Terrorism was paramount among them (Department of National Defence 2005, 5). To deal with these threats, Hillier argued the Canadian Forces must be prepared to deal with a "three-block war". As the document indicates, the three-block war can affect all three branches of the military. In the land scenario, it refers to the overlap between missions, where one block might include a combat operation, another block might include a stabilization operation, and the next block might involve humanitarian relief and reconstruction (Department of National Defence 2005, 8).

With an overall emphasis on tight, urban-based scenarios, Hillier's approach was seen to require various equipment upgrades and changes, predictably, a transformation into a "modern... medium-weight force, based primarily on wheeled Light Armoured Vehicles, including the Mobile Gun System and the Multi-Mission Effects Vehicle (to replace the direct-fire role of the

¹³ Better known for his accounting skills than playing politics, Paul Martin was not a "supporter of defence" expenditures but he recognized the shift in public opinion towards "the need to improve the CF in the post-9/11 era." (Granatstein 2011, 426)

Leopard tank).” (Department of National Defence 2005, 15) Martin liked Hillier’s vision. It was articulate, it laid a clear path for the government to follow, and perhaps most importantly, it was seen as different from Chrétien’s approach. Almost equal to Hillier’s political shrewdness was his policy making ability. He not only assisted Prime Minister Martin in separating his government from Chrétien’s, as Gross-Stein and Lang argue, Hillier’s document helped the Minister of Defence, Bill Graham, “wrest billions of dollars from the finance minister” (Gross-Stein and Lang 2007, 156). In fact, the March 2005 federal budget included a “\$12.8-billion increase over five years in defence funding... the largest such increase in the last 20 years” (Department of Finance 2005, 222).

Controversy continued to swirl around the MGS. The US had been operating 300 of them in Iraq. A classified report obtained by the *Washington Post* showed that in addition to maintenance and technical problems, as well as armour only fifty percent effective against low-tech rocket-propelled grenades, within one American unit, seventeen soldiers had died in 157 bomb explosions. Although it was unclear whether the MGS’ light armour was the main factor in those fatalities, sand filled cans mounted for extra protection indicated US soldiers doubted the vehicle’s adequacy. The report also showed the Stryker’s seatbelts were difficult to use with bulletproof vests; an additional five soldiers were killed in MGS rollovers (Pugliese 2005).

By late 2005, the Canadian Forces had moved from Kabul, back to Kandahar, where they first entered Afghanistan in 2002. It was almost immediately apparent the Kandahar “mission was the most dangerous Canadian military operation in decades. Forty-five Canadian soldiers died in the first few months of the deployment.” (Gross-Stein and Lang 2007, 195) In mid-December 2005, a roadside bomb injured three Canadian soldiers and a British journalist travelling in a lightly-armoured Mercedes Geländewagen (G-Wagon). The soldiers—members of

the 3rd battalion, Princess Patricia's Canadian Light Infantry—were patrolling near the town of Maywand, ninety kilometres west of Kandahar, when the blast crushed the frontend of their Mercedes. One soldier suffered a broken leg and the other a broken ankle and foot. The third soldier and the journalist walked away with minor injuries. It was not the first time a Canadian patrol had encountered a roadside bomb. An initial order of 802 G-Wagons for \$130 million was placed following an October 2003 incident in which two Canadian soldiers hit a landmine while travelling in their Iltis Utility Vehicle¹⁴ (Pedwell 2005). Especially within the context of the more volatile region of Kandahar, the event reminded Canadians—soldiers, politicians, and civilians alike—of the pervasiveness of improvised explosive devices in Afghanistan, and the continuing need for better protected vehicles, if not air transport by way of helicopter.

In the January 2006 federal election, Stephen Harper led his newly united Conservative party to a minority government, becoming the twenty-second prime minister of Canada. During the campaign, Harper reminded Canadians that its military was in desperate need of better funding and better overall support. Martin's 2005 pledge to increase military spending by \$12.8 billion over five years was insufficient. Or, as Jack Granatstein argues, "the funding only existed in a political never-never land." (2011, 428) The Chrétien government dragged the Canadian military through a "decade of darkness"¹⁵, and the Conservatives positioned themselves as the champions of a stronger Canadian forces. Following the election Harper appointed Gordon

¹⁴ Sergeant Robert Short and Corporal Robbie Beerenfenger were killed instantly on 2 October 2003 while patrolling in the Jowz Valley, three kilometres southwest of Camp Julien, the base camp for Canadian soldiers in Afghanistan at the time.

¹⁵ General Rick Hillier first used the term "decade of darkness" in his first address as Chief of the Land Staff in May 2003. Promising to put soldiers first following ten years of cuts amounting to twenty-seven percent of its budget, Hillier said he hopes the army is "poking its nose out of a decade of darkness". (Thorne 2003) Hillier used the term several times over the course of his career, even receiving criticism in February 2007 from Denis Coderre, the Liberal defence critic. When Hillier used the term at the 2007 annual meeting of the Conference of Defence Associations, Coderre accused the general of acting "highly political", suggesting he should run for office if he wishes to use such language (Galloway 2007).

O'Connor as his first defence minister. O'Connor made military "acquisition a personal priority." (Granatstein 2011, 445)

By July 2006, it was reported Canadian [army] officials requested the government cancel the MGS and MMEV orders placed with the General Dynamics Land Systems plant operating out of London, Ontario, and the Québec branch of Oerlikon Contraves. Neither of these companies were very happy (Pugliese 2006a). The Conservatives had been critical of the Liberal plan to replace the Leopard C2s with the MGS and MMEV. In fact, a 2004 Conservative party policy document promised the "procurement of more survivable tanks" (Conservative Party of Canada 2004, 41; Pugliese 2006b). With this in mind, army officials opposing the MGS and MMEV were confident they had a sympathetic government. Neither cabinet, nor Minister O'Connor immediately approved the request, but during that time, army planners were examining ways to extend the life of the Leopard tanks. That August, military maintenance crews at Canadian Forces Base Edmonton were working overtime to prepare some Leopard tanks for a deployment. Several soldiers mentioned the tanks were being prepared for shipment to Afghanistan by early 2007, to protect Canadian patrols and convoys from improvised explosive devices and other forms of attack. An army spokesperson, Major Daryl Morrell, said there was no truth to that rumour, insisting the Leopards were bound for an exercise in September at CFB Wainwright in Alberta (Pugliese 2006c). However, by mid-September 2006, the Conservatives agreed to allow the army to deploy fifteen Leopard C2s to Afghanistan (Moore 2006).

It was Hillier who made the announcement and Operation Medusa changed his mind.¹⁶ The operation was a continuation of the Battle of Panjwaii, which began in the summer of 2006. The area under threat, thirty kilometres west of Kandahar city, was a “constant thorn in the side of Canadian troops” (CBC News 2006). Operation Medusa was a response to the Taliban’s attempt to use conventional tactics to inflict high casualties on ISAF (International Security Assistance Force) and eventually push through to the city of Kandahar (Stein and Lang 2007, 219). However, when confronted by Canadian infantrymen, the Taliban reverted to guerrilla style fighting. Lieutenant-General Andrew Leslie argued “Tanks produce a certain amount of shock action” making them an excellent addition to Canadian operations (Pugliese 2006d). What Hillier took from Operation Medusa was the Taliban had the capacity to blend conventional with non-conventional tactics; perhaps such a scenario would be repeated in future conflicts (Stein and Lang 2007, 220). The dynamic fighting quality of the Taliban, and requests from Canadian commanders, led Hillier to change his position on deploying the Leopard C2s to Afghanistan. “So we’ll use the one that we were keeping in place”, said Hillier, calling it “the right thing to do” in the absence of a lighter, more mobile weapon’s system (Schiller 2006). At that point, Hillier had not changed his mind on replacing the Leopards with the MGS. He simply understood the urgency on the ground, and decided to use what was available. Military historian Jack Granatstein astutely noted at the time that with O’Connor¹⁷ and other senior officials being “all tank drivers by trade”, the switch to the MGS was unlikely (Schiller 2006).

¹⁶ “During Operation Medusa in the fall of 2006, Canadian commanders discovered the LAV IIIs had a tough time getting over the grapefield berms in the Panjwaii district. It was one of the reasons the army chose to quickly deploy older, tracked Leopard C2 tanks.” (Brewster 2008c)

¹⁷ Gordon O’Connor is a former Brigadier-General of the Royal Canadian Armoured Corps.

It was not long after the first Leopard C2s arrived at the Kandahar airfield in autumn 2006 that they were seen as contributing to the success of Canadian ground forces. The honeymoon did not last long. A couple of months later, Canadian forces personnel were asking for something even bigger. The C2s were successful. After just twenty-four hours at a Panjwaii outpost, a C2 from B-Squadron fired two rounds at an undisclosed Taliban target, then turning its 105mm cannon on a grape-drying hut, reducing it to a pile of rubble. Major Trevor Cadieu, commander of the squadron, remarked the C2 raises the morale of the Canadian battle group by augmenting “it with increased fire capability.” (Graveland 2006) Shortly after, Canada led ISAF in a new campaign—dubbed Operation Baaz Tsuka—in the Taliban dominated districts of Zhari and Panjwaii (Hutchinson 2006a). After one week, between 700 and 900 Taliban were surrounded by ISAF, hemmed into a series of mud fortresses and walled farm compounds occupying ten-square kilometres. Canadian officers were boastful of the operation’s swiftness. Lieutenant-Colonel Omer Lavoie argued “This is the first time we’ve projected [this] much combat power” in Afghanistan. Hundreds of soldiers, including thirty vehicles, comprised of light armoured vehicles and Leopard C2s, held the northern flank of the ISAF position (Hutchinson 2006b).

By February 2007, aware that a Taliban spring offensive was on the horizon, Canadian officials announced the government’s intention to lease twenty state-of-the-art Leopard 2A6M tanks from Germany, as well as the purchase of an additional eighty. Canadian forces personnel cited concerns with the level of protection their C2s provided from landmines and rocket-propelled grenades, as well as the availability of parts, and temperature conditions during the summer months. It was reported the tanks could be delivered by spring if the deal was rapidly

approved (Pugliese 2007). Canadian soldiers presented a compelling argument they needed better protection, and cabinet granted permission to proceed in early April 2007.

Certain elements of the Canadian public viewed the purchase differently. In a February 2007 report published by the Canadian Centre for Policy Alternatives, University of British Columbia professor, Michael Wallace, argued even the impressive Leopard 2A6M main battle tank is vulnerable to rocket-propelled grenades and easy to manufacture IEDs. He also argued deploying tanks sent the wrong message to Afghan civilians, making them “incompatible with the spirit of the civilian reconstruction mission envisaged by NATO.” (Wallace 2007, 1-5) But Wallace sparked more controversy by arguing “uparmouring” through the deployment of the 2A6M would simply push the Taliban to “increase the amount of explosive in the device... and follow IED attacks with RPGs”, escalating the level of conflict (Wallace 2007, 1-5). In the House of Commons on 16 April 2007, Liberal members Denis Coderre (defence critic) and deputy leader Michael Ignatieff, argued further tank deployment indicated the government was indeed escalating Canada’s involvement in Afghanistan. Prime Minister Harper defended his government’s decision to purchase the 2A6M, stating “Members of the Canadian Forces who are in Afghanistan are not escalating anything”, rather, they are defending Afghani civilians (Campion-Smith 2007; House of Commons Debates 2007a). All of this controversy unfolded as speculation grew about Canada extending its mission in Afghanistan (Laghi 2007).

The official announcement to purchase 100 tanks from the Netherlands and loan an additional twenty from Germany, was made 12 April 2007, after Minister of Defence O’Connor met in Québec City with his NATO counterparts.¹⁸ The announcement was also made the same

¹⁸ "We feel that it's best for our troops that we acquire stronger, heavily armoured main tanks that increase protection". Minister of National Defence Gordon O'Connor made this announcement following a meeting of

week eight Canadian soldiers died in two separate roadside bomb incidents (CBC News 2007; CTV News 2007a). O'Connor announced the Leopards were in "excellent condition" and that forty of them would be upgraded to the highest technical standard, and sent to Afghanistan to replace the twenty on loan from Germany, as well as the seventeen C2s already in combat. The minister also noted all of the upgrade work would be done in Canada, and the \$650 million price tag would cover the cost of the loan from Germany, the purchase of the Dutch tanks, as well as spare parts and upgrades. The air-conditioned loaners from Germany were to be in Afghanistan in time for the country's infamous summer heat. The 100 from Holland were to be in Canada by autumn 2007 (Fitzpatrick 2007).

Some welcomed the decision. Alexander Moens, a political science professor at Simon Fraser University, argued the use of tanks in Afghanistan proved to be effective, intimidating the enemy and providing force protection (Freeman 2007). Others like Stephen Staples of the Ottawa-based Rideau Institute—an international affairs think tank—argued protection provided by the armour will be a short term gain, eventually surpassed by increased roadside bomb power (Brewster 2007a). Alan Freeman, parliamentary reporter for *The Globe and Mail*, argued "the acquisition of 100 tanks for a mission that now uses only 17 indicates that the armed forces have persuaded the government that Canada will need a robust tank force in the future." (2007) But the military insisted 100 tanks was the minimum number necessary to support a deployed squadron of twenty. That is, two twenty-tank squadrons were required for operations: the first for deployment, and the second to allow for repair and overhaul. The additional forty were for

defence ministers from countries participating in the NATO-led force operating in southern Afghanistan (ie US, UK, Australia, Netherlands, Denmark, Estonia, and Romania) (Freeman 2007).

training at CFB Gagetown, and CFB Wainwright. The remaining twenty were designated for armoured recovery, bridge-laying, and engineering vehicles (Freeman 2007).

The tanks were in such good condition, the Conservative government viewed them as a longer-term solution to Canada's armour requirements. Canada approached six countries with surplus tanks, and received offers from three. Following evaluation, the government decided the purchase from the Dutch, and lease of German vehicles, was the best alternative. At the end of the Cold War, the Dutch decided they only needed about 100 of the 400 Leopards they had recently purchased. With only 400 kilometres on their odometers, the Dutch army properly mothballed 300 in heated storage, making for an ideal future sale (Canadian Press 2007). The Canadian government also stated there would be a competitive bidding process for the upgrade, repair and maintenance contracts related to the purchase (Freeman 2007). Upgrades to the 100 purchased from the Dutch were not expected to be complete until late 2008, only months before the Canadian mission was due to expire in February 2009.

Liberal and NDP members of the house—mostly opposed to combat in Afghanistan—therefore questioned the government's true intentions. For instance, NDP defence critic Dawn Black, as well as Liberal leader Stephan Dion and Denis Coderre, argued the purchase indicated the government's secret plan to extend the combat portion of the mission beyond the 2008 deadline. With fifty-four Canadians dead by spring 2007, both Liberals and NDP were opposed to further combat (Freeman 2007; Naumetz 2007). But O'Connor replied to these concerns during a CBC interview, stating the government and military made a collective decision on the matter after "looking into the future, 10 or 15 years." (Canadian Press 2007) He provided Somalia and Darfur as potential areas the military might deploy to, adding the decision solves

both the troop protection problem in Afghanistan, as well as any conceivable future scenario requiring armour (Canadian Press 2007).

Controversy continued to emerge when O'Connor announced in the House of Commons in May 2007, a twenty-year, \$650 million service contract attached to the tank purchase; a total of \$1.3 billion, or double the amount the Conservative government announced on 12 April (House of Commons Debates 2007b). A Department of National Defence official stated the \$1.3 billion figure was a rough estimate, based on the upkeep costs of the army's existing Leopard C2s. The official did not explain why the government broke with the long-standing practice of citing both the purchase price and long-term support costs in one estimate. This immediately became a serious point of contention (Brewster 2007b). During a May 2007 episode of *CTV's Mike Duffy Live*, NDP member Yvon Godin, and Liberal Ujjal Dosanjh, accused the government of intentionally misleading Canadians on the true cost of the Leopard 2A6Ms, as well as the intent behind the purchase. Conservative MP Laurie Hawn—on the show to defend the government—argued follow-on costs are implicit in most defence acquisitions, and that both NDP and Liberal members were simply opposed to the mission in Afghanistan, and unsympathetic to the safety needs of Canadian soldiers (Duffy 2007). But the issue of the escalating cost sparked debate about the nature of Canada's mission in Afghanistan, namely, the benefits \$1.3 billion would have brought to reconstruction. Calling for an immediate withdrawal of combat troops from Afghanistan, NDP leader Jack Layton went so far as to accuse the Conservative government of being “more attuned to offensive warfare rather than Canada's role of peacekeeping.” (CTV News 2007b; also see Sullivan 2007)

The debate about the utility and appropriateness of new tanks mostly began and ended with politicians and high-ranking military personnel. However, one element of the public service

made its position known. Since the beginning of 2007, the Privy Council Office—the cabinet secretariat and closest non-partisan adviser to the prime minister—had expressed skepticism the army needed tanks in the longer term (Brewster 2007c). Alain Pellerin, the executive director of the Conference of Defence Associations, argued certain high-ranking members of the bureaucracy maintained the Chrétien era myth Canada is a strictly peacekeeping nation. As the debate dragged on throughout February and March 2007, Lieutenant-General Andrew Leslie made a principled stand. Believing strongly that tanks were making a crucial difference in Afghanistan, and would continue to do so during future missions, Leslie threatened to resign if the government decided not to purchase the slightly used tanks. Minister O'Connor favoured the purchase and ultimately silenced the debate when he backed Leslie, ramming the entire package through cabinet in early April (Brewster 2007c).

The Conservatives had succeeded in making a decision, but larger problems loomed. During the summer of 2007, in addition to a one-month delay in delivering twenty borrowed tanks to Afghanistan by July,¹⁹ it was discovered there was no company in Canada capable of quickly upgrading a batch of forty Leopard 2A4s. The initial purchase of Holland's surplus 2A4s included \$200 million for upgrades, mainly to install air conditioning, as well as armour designed to withstand roadside bombs. In April, both Minister O'Connor and public works Minister, Michael Fortier, said Canadian industry would see great benefits from the tank purchase. Under attack from the opposition for sole sourcing the purchase, the Conservatives promised open bidding for both the immediate upgrades and the long-term maintenance contract.

¹⁹ Four of the twenty Leopards Canada borrowed from Germany were delivered to Kandahar by 16 August 2007, aboard an Antonov transport aircraft. Two special purpose armoured vehicles were delivered by the end of August. The remaining tanks were shipped shortly after (Times & Transcript 2007). Fearing soaring temperatures of more than 50 degrees Celsius, the original goal was to have the air-conditioned Leopards in Afghanistan by July.

The problem was only one company—Rheinmetall Canada, based in Montréal, Québec—was even remotely prepared to conduct the upgrades. Formerly Oerlikon Canada, Rheinmetall's primary source of business was servicing air-defence vehicles. It was therefore yet to be determined if Rheinmetall had the capacity to add armour to the Leopard 2A4s, which required a major disassembling, with turrets, tracks, and wheels taken off. In addition, a German defence source was skeptical an air-conditioning system could be installed on the older 2A4 variant. An unidentified source from the German army stated the air-conditioning installation depended on the “auxiliary power unit”, noting the 2A4 might not have enough power to “handle the load.” (Brewster 2007c) Dan Ross, Assistant Deputy Minister (Matériel) at DND, said he was assured by the manufacturer a climate control system was possible. Ross also said the solution may include a combination of blown air and cooling vests for the crew. Interestingly, he did not acknowledge part of the rationale for purchasing the next-generation Leopards was to avoid the use of a cooling vest, which was cumbersome for soldiers already wearing body armour. The main problem was finding a way for Canadian industry to take part in the refurbishing process. A member of the Royal Canadian Military Institute, retired Colonel and tank commander, Chris Corrigan, noted the expertise to handle tank upgrades disappeared when it was announced in 2003 the Leopard C2s were being scrapped. Corrigan observed maintaining a defence industrial base is essential to Canadian security. While Dan Ross' assessment was realistic in that some of the refurbishing would have to be conducted overseas, the government was keen on keeping the work in Canada, even though doing it in Québec was politically sensitive as the Conservatives were being criticized for a “trail of feel-good defence spending projects” in the province (Brewster 2007c).

As the remainder of the German loaners arrived in Kandahar between October and December 2007, the government and bureaucracy switched their focus to the matter of finalizing a purchase contract with the Dutch. In addition, pressuring the government to sign the upgrade contract was Jean-Claude Rollier, Rheinmetall Canada's executive overseeing the company's land defence arm. In a July 2007 interview, Rollier noted that unless the government signed the upgrade contract within one or two months, a worldwide shortage of tempered armour had the potential to delay the scheduled 2008 deployment of any purchased Leopards to Afghanistan. Rollier shared his concern that ordering the steel in advance was necessary to ensure it was available at the right time. He was not about to purchase steel without a finalized government purchase from the Dutch (Brewster 2007d). On 14 December 2007, Canada signed a formal purchase agreement with the Netherlands for 100 Leopard 2 battle tanks. The ceremony was held at the De Salaberry Armoury in Gatineau, Québec (Defense Industry Daily 2014).

Jean-Claude Rollier's attempt to pressure the government into finalizing the purchase of Dutch-owned Leopards appears to have helped. After all, the contract was signed before the end of 2007. However, it did not change the schedule in so far as getting those particular tanks into Afghanistan in a timely manner. The Canadian government remained concerned that Canadian industrial expertise was not equipped to carry out its refurbishment plans. Coincidentally, Canada needed to keep its German loaners. Canada was supposed to return the borrowed Leopards to Germany by September 2009, in the same condition they were received. However, a combination of overuse and rough, Afghani terrain, made this infeasible. As an alternative, in February 2008, Minister of Defence Peter MacKay proposed Canada refurbish twenty of the 2A4s purchased from the Dutch, and give them to Germany in exchange for keeping the borrowed 2A6Ms (Brewster 2008a). Public Works officials confirmed the plan was to refurbish

and upgrade twenty of the 2A4s in Europe with German manufacturer Krauss-Maffei—the original manufacturer of the Leopard. Liberal defence critic Denis Coderre was unsurprised with the move, blaming the Conservatives for purchasing a tank without “having a proper plan in place and making sure there are economic benefits for Canadian industry” (Pugliese 2008a). Coderre neglected to mention the reason the work was not being done in Canada was because the tank refurbishing industry disappeared during tenure of the previous two Liberal governments. In spring 2008, both Dan Ross and Jean-Claude Rollier acknowledged the shortfall in the Canadian armour industry meant it would take years—possibly until 2011—to get the Leopard 2A4s refurbished and ready for operational duty in Afghanistan (Pugliese 2008a; Brewster 2008b).

Given the circumstances, keeping the German loaners made sense. Of course, Harper’s Conservative government was criticized for failing to deliver on Gordon O’Connor’s April 2007 promise the tanks would arrive in Canada from Holland in six months. In fact, the first batch of forty were unloaded from a supply ship in Montréal in December 2008, more than a year behind schedule. However, without a confirmed company to do the \$200 million in highly technical modifications,²⁰ it did not really matter where the tanks were located. At the time, according to federal documents, a tender for the work was not expected to be issued for at least one year. Therefore, the tanks sat idle at the 202 Canadian Forces workshop depot in Montréal (Brewster 2008d). Although there was no practical operational benefit, having the tanks in Canada equaled improved political optics, at a time when Harper was wise to take whatever he could get.

In the beginning stages of a global economic recession, the recently re-elected Conservative government was facing a non-confidence vote in the House of Commons,

²⁰ The technical work included installing an electric turret drive, a shorter gun barrel, and an air-cooling system (Brewster 2008d).

scheduled for 8 December 2008. Arguing the Conservatives were mishandling the economic downturn and other policy areas generally, the Liberals, NDP, and Bloc Québécois proposed a coalition government. Just days before the vote was to take place, Harper received permission from Governor General Michaëlle Jean to prorogue parliament until 26 January 2009 (Cheadle 2008). It was not a popular move, but it provided the prime minister with some time to calm the storm and rebuild his support. It had been a challenging year for Harper's minority Conservative government. The Canada First Defence Strategy, announced in May 2008—but “quietly released” on the Internet in late June—provided an extensive list of procurement goals, which the Liberals criticized for lacking sufficient funds to accomplish. NDP Defence Critic, Dawn Black, complained the secrecy of the release demonstrated Harper's contempt for government accountability, and disregard for the need to set money aside for more important things than Howitzers and armoured vehicles. (Pugliese 2008b; Canadian Press 2008). In July, a DND report noted the army's stock of mine plows—used for clearing IEDs—were incompatible with the new Leopards (Woods 2008). To make matters far worse, by 5 December, there were 100 deaths related to Canada's mission in Afghanistan. In no way diminishing the relative catastrophe of the death toll, a slight reprieve arrived in December, when Canada's Leopards began receiving positive reviews. Members of the Canadian Forces felt they saved lives, intimidated opponents on the battlefield, and were a “boon” to morale (Graveland 2008). Receiving the first batch of Leopards was a breath of fresh air, at a time when the government was nearly choking.

The reprieve did not last long. The Conservative government avoided falling to a non-confidence vote, but the decision to refurbish the Leopards in Europe called into question their commitment to assisting the domestic defence industry. Chief of the Land Staff, Lieutenant-General Andrew Leslie, reported to a Senate defence committee in early March 2009, the

Leopard 2A6Ms borrowed from Germany were in urgent need of repair (Canada AM 2009). A combination of extensive combat, Taliban attacks, construction projects, as well as a lack of spare parts, meant the Canadian army required an additional twenty in Kandahar immediately. Since Dan Ross reported the forty stored in Montréal would not be ready until 2011 at the earliest, Minister of Defence Peter MacKay proposed in a memorandum to cabinet that twenty of the forty Leopards in Europe²¹ be refurbished in Germany and sent as quickly as possible to Afghanistan, cutting Canadian companies out of the opportunity to win contracts (Pugliese 2009a). PWGSC Minister Christian Paradis and Industry Canada Minister Tony Clement approved the proposal. Of course, Liberal defence critic Denis Coderre argued the move was a failure on the part of the government to follow through on a promise to Canadian industry: “This work was supposed to be done in Canada and now the government is changing its mind... These tanks were bought two years ago. What's the delay?” (Pugliese 2009b) Coderre was correct. Minister O'Connor had previously heralded the purchase as another way the Conservative government was investing in the Canadian economy, in the near and long term, considering the thirty-year in service support required. MacKay's spokesperson, Jay Paxton, commented there had been no decision by DND on which Canadian company would conduct the refurbishing. The urgency in Afghanistan trumped the promise to Canadian industry (Pugliese 2009b).

A fall 2009 report by the Auditor General of Canada “examined four urgent projects... to acquire military vehicles that would improve operational capability and the protection of soldiers in Afghanistan.” (Auditor General 2009, 1) One of these was of course the Tank Replacement Project. The report looked at three main items. First, it examined whether the acquisitions met

²¹ The other twenty were of course still earmarked for the German Bundeswehr. This of course meant that forty Leopard 2A4s would be refurbished in Germany, instead of just twenty.

the government's project management policies. Namely, it looked at how DND and PWGSC coordinated to ensure the contracting complied with government policies. Second, the report examined the "challenge role played by the Treasury Board of Canada Secretariat when project and contract proposals were submitted for Treasury Board approval." (Auditor General 2009, 1) Third, the report looked at whether the acquisitions would help meet the Canadian Forces' urgent operational needs. Generally, the report noted the four projects were not managed in accordance with DND's project approval guide. There was no process in place to ensure projects complied with government policies. Documentation was either not prepared or was deficient, therefore providing little assistance to ensuring government management policies were followed. The Treasury Board of Canada Secretariat reviewed and challenged documents submitted by DND, but overlooked DND's failure to properly document government management policies such as strategies to mitigate risk. With some exceptions, operational needs were generally met to the satisfaction of the Canadian Forces (Auditor General 2009, 2). More specifically, the urgency of the Tank Replacement Project resulted in corners being cut by DND, and a failure to meet all of the most urgent operational needs.

Treasury Board project management policies require departments to establish "sound internal policies, guidelines, and practices." (Office of the Auditor General 2009, 6) DND established its own Project Approval Guide as a source for policies and procedures on the approval process for projects. The guide details four main phases of the procurement process, each with various required documents. In many of these phases, DND failed miserably.

With the first phase, known as the Identification Phase, DND did well. DND successfully established broad recognition of a tank deficiency, identified options, provided a total anticipated cost, and gained internal permission to proceed with planning. In the second phase, the Options

Analysis Phase, DND's performance was abhorrent. It did not establish a mandate for how the project would be organized. It neither identified risks, nor submitted any risk assessment document to TBS. It did not even gain preliminary project approval, which would ordinarily be required to proceed to the Definition Phase. With this third phase, DND's performance was almost equally poor. Although it provided a Statement of Operational Requirements, DND did not generate a quality cost estimate, accounting for all project objectives and deliverables. In addition to not defining how the project would be executed, monitored, controlled, and closed, DND once again failed to gain internal approval to proceed to the fourth and final phase, the Implementation Phase (Office of the Auditor General 2009, 9). The Office of the Auditor General concluded these failures resulted in considerable problems with the operationalization of the Leopards, as well as cost and delivery.

As far as operationalization, the report noted that some of the Leopard 2A6Ms had not replaced the older Leopard C2s because they could not be fitted with land mine ploughs, bulldozer blades, and mine rollers. The report also cited problems with equipment failure and a shortage of parts, requiring Task Force Afghanistan to cannibalize parts from tanks on site in Afghanistan and from tanks DND bought for troop training in Canada. In terms of delivery, the Auditor General noted DND was unable to deliver the borrowed 2A6Ms to Afghanistan by the end of July 2007, as was the original goal. Instead, the first four tanks and two special-purpose vehicles were not delivered until August 2007. And it was not until October that Canadian command was satisfied everything was in place to permit their use. The remaining tanks became available in December 2007. The report also noted the failure to have twenty tanks immediately available for training in Canada. As mentioned, the training tanks had to remain in Europe to replace the badly worn 2A6Ms borrowed from Germany. Canadian soldiers therefore had to be

sent to train with the German army, accruing additional costs. A cap on funding also meant the 2A4s purchased from the Dutch could not be upgraded to the desired level. This of course meant the training fleet was different than the deployment fleet. Finally, the report noted DND was only able to fully employ the tanks two years behind schedule. The primary reason cited was that PWGSC prevented DND from “entering into a contract with the Original Equipment Manufacturer (OEM) to gather the information required for planning the modifications.” (Auditor General 2009, 23) PWGSC stated its reason was to prevent the OEM from gaining an advantage in subsequent contracting processes related to the tanks. DND also cited PWGSC prevented it from contacting the OEM (Auditor General 2009, 22-3).

Although the Auditor General’s report identified significant shortcomings in the project, it noted the borrowed Leopard 2s were “saving lives.” (Auditor General 2009, 22) In fact, despite a July 2011 deadline to Canada’s combat mission, in December 2009, the government decided to ship an additional twenty tanks to Afghanistan to replace destroyed and worn out vehicles. Expected to arrive in autumn 2010, the Leopards were to be shipped directly from Germany, where they were being refurbished (Pugliese 2009c). The move coincided with President Barack Obama’s decision to greatly increase the number of American troops in Afghanistan,²² leading to speculation the Canadian combat mission would be extended beyond 2011 (Pugliese 2010). But that was not the case. Simply put, tanks were considered essential to Canada’s operational success, even influencing the Americans to deploy its M1 Abrams to Helmand province in 2010. Prior to that, the only other country that fielded tanks in Afghanistan was Denmark (Fisher 2010).

²² In 2010, President Obama increased the number of American soldiers in Afghanistan by 30,000, bringing the total to 100,000 (Pugliese 2010).

As promised, the combat portion of Canada's mission in Kandahar ended in July 2011. The Mission Transition Task Force packed-up vehicles, equipment, and other materiel to be transported to Canada or shipped elsewhere in Afghanistan (Department of National Defence 2014). The Leopard tanks had done the job they were intended to do, but the Tank Replacement Project was far from over. As mentioned, the project consisted of two phases. As part of the first phase, Canada had borrowed from Germany twenty Leopard 2A6Ms and two Armoured Recovery Vehicles for immediate use in Afghanistan. These loaners had to be returned, a process that did not begin until December 2014 when Germany received its first 2A7 Main Battle Tank, upgraded by the original manufacturer Krauss-Maffei Wegmann. The first phase also included the acquisition of 100 surplus Leopard 2s from the Netherlands (Pugliese 2015).

The second phase mainly encompassed the refurbishing process and *ad hoc* acquisitions of spare parts and other technical items. Twenty Leopard 2s were to be converted to the 2A4M by Krauss Maffei Wegmann in Germany. An additional twenty were converted to the 2A6M, also by Krauss Maffei Wegmann. Rheinmetall Canada won a contract to repair forty-two 2A4s. An additional eight Leopard 2 ARVs were acquired from Rheinmetall Land Systems and Rheinmetall Canada. Ammunition, simulators, special tools and test equipment, as well as spare parts, "Sub-Calibre Training Devices" and more upgrades were contracted from a host of suppliers such as General Dynamics Ordnance and Tactical Systems in Québec, Rheinmetall Defence Electronics in Germany, and of course, Krauss Maffei Wegmann.

The Tank Replacement Project began in August 2007, evolving over a decade to eventually project a December 2017 close out date. According to a DND status report on major crown projects, the project achieved its primary objectives. By March 2017, the report noted all eighty-two Leopard 2A4, A4M, and A6M main battles tanks, as well as the first eight Leopard 2

ARVs funded by the Tank Replacement project had been delivered. An A4M upgrade was reported as “progressing with 18 of 20 vehicles complete.” The report also noted the project remained on budget (Department of National Defence 2017).

Results and conclusions

Falling short of one of its intended goals, the Tank Replacement Project had a subtle yet present suboptimal result. And although it is not glaringly obvious, the bureaucratic politics model does provide clarity as to why this happened. To mitigate opposition to the Leopard 2 purchase, the Conservative government set a goal of refurbishing the tanks in Canada. Arguably, there was already a practical reason for the tank purchase: the mission in Afghanistan. With Canadian military procurement, practicality is sometimes anathema. Canada’s normative approach of ensuring as much domestic production as possible was impractical given its waning armour industry. The suboptimal result was partial cancellation of Canadian refurbishment.

There are two main parts of the Tank Replacement Project. The first concerns the debate over what should replace the Leopard C2s (ie the MGS or a main battle tank). The second deals with the actual decision to purchase the Dutch tanks, as well as the problem of delivering the tanks and arranging for Canadian contractors to conduct the refurbishments the original plan called for. Hillier claimed he had a practical reason for seeking the MGS instead of another tank, but the combination of Canada’s mission in Afghanistan and a tank hungry military pressuring a sympathetic government, led Canada to replace the Leopard C2 with the next-generation Leopard 2. The goal of refurbishing in Canada was the result of a Conservative government intent on mitigating conflict over the purchase. Unfortunately, Canada’s armour industry at that time was unable to meet the scale of refurbishments required. The Conservatives likely knew

there was little hope of finding a company to perform immediate refurbishments, but it did not really matter. What mattered was getting the tanks to Afghanistan and signing a contract for a tank replacement.

The debate about replacing the Leopard C2s began in the 1990s. As part of this debate, Lieutenant-General Maurice Baril (senior player) argued the end of the Cold War meant main battle tanks were less necessary. This notion appealed to a Liberal government intent on balancing the budget. Lieutenant-General Rick Hillier (senior player) took this a step further. Hillier essentially argued tank warfare had stifled Canadian army doctrine. What is strange about Hillier's position is that, as a former armoured officer, one would expect the general to envision a Canadian Army with both main battle tanks and light armoured vehicles. In line with the bureaucratic politics model, senior military personnel seek equipment they perceive necessary to remain competitive on the field of battle. Given the changing strategic environment of the 1990s—not to mention the shift in operational thinking—Hillier likely viewed the MGS as a practical opportunity to maintain a heavy firepower armoured element without the pain of convincing an austere Liberal government to purchase actual heavy armour.²³ Hillier sought out a piece of equipment he perceived as competitive given the changing operational environment, and expedient given the frugality of Chrétien's Liberal government. His experience navigating the political side of Ottawa likely developed in Hillier a practical perspective. (A perspective in which any naïve expectation of controlling an army equipped with laser shooting flying saucers was tempered by the imposing austerity of the federal policy world.)

²³ In addition, like Prime Minister Trudeau nearly thirty years before, Hillier viewed Canada's tanks as unutilized materiel because they were not generally deployed abroad.

Hillier's point the Leopard C2s were not being deployed was correct, but it is unclear why he thought the MGS would be treated differently barring the upgrade of the Hercules or the purchase of a larger strategic airlift capability. Media publisher Scott Taylor (junior player) did an excellent job of exposing the inconsistencies in Hillier's argument. Although Hillier more or less responded to Taylor, determining whether the exchange mattered is challenging. According to Taylor, *Esprit de Corps* has a wide readership in the Canadian defence environment (eg the CAF, parliamentarians keyed in to defence issues, and defence industry). However, it is difficult to say whether his opinion on the matter affected Hillier's thinking. In any case, Hillier's opposition to replacing tanks with more tanks was supported by the Minister of National Defence, John McCallum (senior player). When Paul Martin (senior player) became prime minister in 2003, Hillier had his support as well. However, for all of the work Hillier did trying to convince the government to purchase the MGS, the CDS' influence on the matter was eventually eclipsed by negative reports on the MGS, the success story of the Leopard C2 in Afghanistan, an audacious general, and a new Conservative government intent on bolstering the army's combat capabilities.

The bureaucratic politics model does not include war as a player, but it does account for defence ministers. The Conservative party's 2004 pledge to replace the Leopard C2s with "more survivable tanks" did not immediately change the policy dynamic. Once in office, the Conservative's campaign promise to give the military new tanks—in addition to tactical problems in Afghanistan—provided the opportunity to break from the Hillier-led effort to buy the MGS. Hillier did not change his mind when it came to replacing the Leopard C2s with the MGS, but the problems the LAV IIIs experienced during Operation Medusa—including traversing grapefield berms, and providing adequate firepower—led the CDS to conclude a

Leopard C2 deployment was prudent. The success of the deployment enabled further military advocacy for the tank. In spite of PCO (senior player) arguing against new tanks, the Conservative government, especially Minister of National Defence Gordon O'Connor, listened to Lieutenant-General Andrew Leslie. A senior player himself, Leslie advocated on behalf of a new tank—putting his career on the line—because he knew it would be operationally effective and that it would save lives in Afghanistan. In addition to threatening his resignation, Leslie offered a compelling argument that offset the PCO's antiquated notions of Canada's supposed disposition for peacekeeping. Of course, Rheinmetall's Jean-Claude Rollier (junior player), pressured the government to finalize the purchase from the Dutch, but it is difficult to judge whether his input played a major role in the decision. The government seemed poised to make the purchase anyway.

Primarily reflecting differing national security interests, opposing political voices (junior players) revealed positions consistent with their party affiliations, utilizing political rhetoric to undermine the purchase of the next generation Leopard tank. Echoing UBC professor Michael Wallace, elected member Michael Ignatieff argued a tank deployment was an escalation of the conflict. Jack Layton accused the Conservatives of valuing offensive warfare over peacekeeping. Dawn Black, Stephan Dion, and Denis Coderre expressed concern the purchase indicated the government was secretly planning to extend the combat mission in Afghanistan past the 2008 deadline. Yvon Godin and Ujjal Dosanjh accused the government of misleading Canadians on the true \$1.3 billion cost of the sale by neglecting to announce the twenty year service contract. Although all of these arguments and accusations had the potential to appeal to Canadian sensibilities, they did not end up stalling let alone reversing the decision to borrow and purchase newer Leopards. The mission in Afghanistan—whether one saw it as combat or peacekeeping—

was too important to deny the military the equipment it felt necessary to execute their responsibilities and save lives. With dead and wounded soldiers returning home, the opportunity to purchase tanks had arrived. A policy window had opened.

While it is unfortunate the Leopard 2A6Ms were delivered from Germany to Afghanistan one month behind schedule, the real problem the project experienced was the failed promise to refurbish all of the purchased Leopards in Canada. This latter problem is either the result of the Conservatives making an announcement in bad faith, or without considering the logistical problems that existed. On the surface, it appears this problem had nothing to do with the competitive interaction described in the bureaucratic politics model. The Conservatives simply made a promise they could not deliver. Scratch the surface, and it is possible to speculate the Conservatives made the announcement to avoid political friction that might have delayed or even prevented the purchase.

Although it is true the armour refurbishment industry in Canada began to decline under the stewardship of previous Liberal governments, the onus was on the Conservatives to ensure their own goals were achievable. Cognitive limitations might explain a Conservative government unaware of the extent of Canada's limited domestic armour industry. Although the auditor general's (senior player) 2009 report indicated DND cut corners to meet the urgent operational needs of the troops in Afghanistan, the report did not address why the Conservatives announced a promise they could not keep. The refurbishment announcement could have been the result of a calculation Canadian troops needed new replacements immediately. (One might even view it as a moral calculation.) Time spent debating the merit of purchasing tanks might have delayed delivery, or derailed the project entirely. Since criticizing the industrial benefits portion of a procurement project is politically risky, the Conservatives might have calculated they could

increase their chances of short-term success with a promise to industry. Whereas Conservative national security interests can differ from those of their Liberal and NDP counterparts, Canadian political parties typically agree domestic industrial development goals are an essential component of a robust economy. However, while the promise was a way of avoiding political friction, it was probably unnecessary given the momentum provided by the conflict in Afghanistan.

Contrary to what the bureaucratic model tells us, departments PWGSC and Industry Canada did not appear to object to the decision to refurbish in Germany. This is likely indicative of Prime Minister Stephen Harper's close control of his cabinet, resulting in a trickledown effect whereby deputy ministers were compelled to remain silent.²⁴ Alternatively, it suggests the situation in Afghanistan took precedent over the goal of boosting Canadian industry, and those two departments fell in line. In addition, Lieutenant-General Andrew Leslie provided a compelling argument when he reported to a senate defence committee in March 2009 the borrowed 2A6Ms were in desperate need of repair. This contributed to the decision to refurbish twenty of the forty stored Leopards with a European company. However, the Conservatives made a mistake in originally making a promise they could not keep. Not only did they neglect to initially disclose the full cost of the purchase, refurbishment, and follow-on maintenance contracts over the life cycle of the Leopard 2s, they gave their political opponents a perfect opportunity to garner support from Canadian industry and taxpayers interested in creating

²⁴ With these types of speculations, the first instinctual reaction is to bolster research by posing direct questions to public servants involved with the case. However, few high-level public servants are outspoken. Their careful discretion is often why they were able to ascend the ranks of the federal public service. In addition, many would not see it in their interest to reveal what happened exactly, between the PMO, cabinet, and deputy ministers.

Canadian jobs. Fortunately, for both the Conservatives and the project itself, political opportunity for the opposition did not result in a cancellation.

The auditor general's report cited some very specific shortcomings regarding DND's use and submission of documents during various stages of the procurement process. Namely, the military procurement process includes built-in opportunities for TBS to scrutinize DND's risk assessments. Based on the bureaucratic politics model, one would expect TBS scrutiny to contribute to stalling procurement progress. Instead, according to the auditor general's report, it was DND's failure to follow procurement protocols that contributed to problems with delivery and operationalization. Instead, for the sake of saving time during the initial stages of the project, corners were cut. The irony here is that not only did cutting corners contribute to longer-term problems with operationalization and parts sourcing, it did not ensure the timely delivery of the German loaners to Afghanistan: they were still delivered one month behind schedule.

As the central purchasing agent of the federal government, PWGSC has a mandate to ensure fairness, openness, and transparency in federal procurement. PWGSC's move to prevent DND from entering into a contract with the OEM demonstrates their commitment to ensuring contracting fairness. As addressed in the theory section above, it is also an example of how following standard operating procedures can contribute to suboptimal outcomes. PWGSC was simply following protocol to avoid a scenario in which one company had an unfair advantage over others. However, denying DND access to the information necessary to plan modifications was a boondoggle, as it added nothing of value to the outcome and resulted in delays in adding mine protection implements to the tanks. With all policy, there must be a reasonable limit to its application, depending on circumstances. The PWGSC website provides examples of when it is acceptable to forgo the competitive procurement process and sole-source a contract. One

example that applies to the Tank Replacement Project is a “pressing emergency in which delay would be injurious to the public interest”. Of course, the delay in adding mine protection implements to the new Leopards was injurious to the safety of Canadian soldiers, and the Canadian national interest. Another applicable example is when “Only one person is capable of performing the work”. At the time PWGSC prevented DND from entering into a contract with the OEM, it appeared as though Krauss-Maffei Wegmann was the only supplier capable of getting Canada the parts and supplies it needed to be effective in Afghanistan. Finally, PWGSC also states a non-compete is acceptable when “The nature of the work is such that it would not be in the public interest to solicit bids (for example, requirements dealing with national security, such as some military projects).” (Public Services and Procurement Canada 2015) Although the Tank Replacement Project was a military project dealing with national security, it is difficult to argue soliciting bids would contravene the public interest. The issue was not that bid solicitation in its own right was a problem. Rather, the delay caused by seeking new bids was the problem.

Although the outcome was not entirely optimal, the Tank Replacement Project produced some successful outcomes. In the short term, the project delivered a valuable asset to Canadian forces in Afghanistan, even if the loaner tanks were delivered a month behind schedule. In the long term, the purchase of a tank provided an effective replacement to the Leopard C2, reinforcing the tank’s long-term position as an asset rather than a “millstone”. According to DND’s website, the project even remained on budget. When it came to the goal of refurbishing the purchased Leopard 2s in Canada, the Tank Replacement Project fell short. *Prima facie*, this suboptimal result does not match schedule slippage, cost-overruns, and cancellations. In an indirect way

however, it could be considered a form of cancellation. A stated goal was to have companies operating in Canada refurbish all of the second-hand Leopard 2s. Half of this plan was cancelled.

Although Minister O'Connor initially touted the tank purchase as a boon to Canadian industry, more than half of the upgrades and conversions ended up taking place in Germany. The reason these upgrades were cancelled was Canada's armour industry was in a state of decay. But this factor is only part of the reason the project fell short. In essence, replacing tanks with tanks was controversial, and the Conservatives promised domestic based refurbishments to mitigate competitive friction. Assuming the Conservatives knew of Canada's moribund tank industry, they either did not understand the extent of its decay, or they knew the extent, and promised to deliver an undeliverable—perhaps out of moral considerations for the mission in Afghanistan. In either case, the Conservatives understood the controversy over purchasing tanks, and perhaps saw the refurbishment promise as a way of improving the project's political optics.

(To an extent, the bureaucratic model helps us understand why the Tank Replacement Project generated certain suboptimal results.) While it is true that some positions—mainly Hillier's—differed from the expected norm, and that interdepartmental conflict was more muted than one might have expected, the bureaucratic politics model is helpful in identifying a number of positions present in the interaction surrounding the project. It adds clarity to why certain positions existed and how they affected interaction. It even provides clarity on the affect senior players can have on a decision. For instance, even though the Conservatives were intent on eventually replacing the C2s with a newer battle tank, a combination of the situation in Afghanistan and Lieutenant-General Andrew Leslie's morally-charged brinksmanship, compelled Minister O'Connor to ignore PCO concerns and convince the rest of the Conservative cabinet to purchase the tanks as quickly as possible. Senior military players and the context of

conflict made it easier to decide, but ultimately a cabinet minister wielded the power necessary to make it happen.

Most importantly, the bureaucratic politics model provides the structure necessary to make sense of why the Tank Replacement Project failed to meet one of its primary goals. Many of the refurbishments did not initially take place in Canada because they could not take place in Canada. However, the Conservative government's promise should not have been made in the first place. The promise was likely born out of an understanding that Canadian military acquisitions are expected to generate solid opportunities for participation by Canadian industry (Stone 2009). Assuming Minister O'Connor understood the unlikelihood of immediate Canadian industrial participation, the minister bears some of the responsibility, along with his cabinet and prime minister. Based on the bureaucratic politics model, I predicted competition for determining outcomes can result in decisions that produce suboptimal results. In this case, it appears competition was responsible for the project falling short of one of its intended goals. The Conservative government was essentially competing with their political opposition, as well as the PCO, to purchase a tank instead of the MGS. A competitive spirit led the government to make false claims about the industrial potential of a tank purchase.²⁵ Once the tanks were acquired, and once it was deemed necessary to prepare more tanks for operations in Afghanistan, there was no other viable option than to refurbish in Germany. Although several noteworthy junior players voiced their opposition to the refurbishments taking place in Germany, it had little to no effect on the outcome. Given the lack of a domestic tank refurbishing industry, and the urgency of getting the new Leopards operational, the government had only one realistic option.

²⁵ What this says about Canadian policymaking is that open dialogue is difficult to have. Political parties are especially cautious of debating something, knowing debate can lead to delays and cancellations. Canadian procurement projects are therefore prone to problems because the political culture surrounding them is secretive.

CHAPTER 6—THE JOINT SUPPORT SHIP PROJECT

“A navy with no ability to replenish itself at sea is basically not a real navy.” (Sloan 2017) In 2015, Canada’s only remaining Auxiliary Oil Replenishment (AOR) ships—the HMCS *Protecteur* and HMCS *Preserver*—were taken out of service. Their replacements—waiting in a production queue at Seaspan shipyards in Vancouver—were not slated for completion before 2021. If anyone understood the gravity of the situation, it was the Royal Canadian Navy’s (RCN) Vice-Admiral Mark Norman. In November 2014, Norman warned a House of Commons committee Canada could not rely on its allies to resupply its warships (Pugliese 2017a). Just over two years later, Norman was facing an RCMP investigation for allegedly leaking the contents of a Liberal Cabinet discussion over delaying Project Resolve—a project designed to supply an interim AOR to the RCN (Doucette 2017).

The RCMP eventually laid charges against Norman in March 2018. His lawyer maintained he was the victim of a vengeful Liberal government embarrassed by the publication of its handling of the project²⁶ (Pugliese 2018e; Pugliese 2017d). The project to supply an interim AOR went ahead. In no way a frivolous expenditure, AORs are essential to blue water naval operations. As Elinor Sloan wrote “Naval operations are an important and sometimes critical extension and expression of Canadian foreign and defence policy. A navy that has become dependent on allies to sustain itself at sea has effectively ceded part of Canada’s ability to support its national interests and defend its sovereignty.” (2017) There certainly is evidence

²⁶ The publication refers to an article by CBC journalist Nathan Cudmore, published 20 November 2015. In it, Cudmore revealed Irving Shipbuilding “meddled” in the previous Conservative government’s decision to proceed with the \$700 million, seven-year contract with Davie for an interim supply ship. Through unspecified sources, Cudmore alleged Irving sent letters to several cabinet ministers about the deal, claiming it was made on a non-competitive basis. Irving asked the Liberal government to reconsider its own offer to provide a lower-cost option before making a final decision. The problem for Canadian taxpayers was a letter of intent signed by the Conservatives offered Davie \$89 million if the contract was not signed by 30 November. Davie had already purchased the ship and was ready to begin work in its yard near Québec City. (Cudmore 2015).

suggesting Norman was concerned with a Liberal plan to scrap Project Resolve. Under court order, the RCMP released emails between Norman and Spencer Fraser, CEO of Project Resolve, which demonstrated Norman's frustration with the Liberals (Pugliese 2017b). However, Norman's suspension was really a distraction from the issue of completing Canada's Joint Support Ship Project. A sideshow, it none-the-less demonstrates the disharmony in Canada's defence procurement process, where military concerns as crucial as naval supply are second to the politics of industrial regional benefits.

The past: support ships are essential to Canadian security

Decommissioning the *Protecteur* and *Preserver* was not the first time in recent history the RCN would be forced to operate underequipped. In an effort to free up money for new equipment, the early 1960s saw three of the RCN's Tribal class destroyers (*Nootka*, *Cayuga*, and *Micmac*) prematurely decommissioned. Without replacements, taking these destroyers out of service meant the RCN was forced to operate short of its forty-three ship alliance commitment (Mayne 2009, 154). It was during this time the government was slashing the defence budget, and the navy was placed in the difficult position of prioritizing amid vague and unclear government defence planning (Milner 2010, 222). Uncertain how to deal with Third World instability, the Liberals sought to avoid binding "the government to a particular formula which might prove an embarrassment in the future." (Mayne 2009, 153) Nonetheless, certain equipment platforms were arriving in this financially uncertain period. In May 1963, the first Sea King helicopter was delivered, and the DDH helicopter-carrying destroyer concept was becoming a reality with five ready by the end of 1964. Furthermore, the RCN's first operational support ship, HMCS *Provider* (AOR 508), was ordered in 1958 and commissioned in 1963, giving "the navy a

considerable logistical support capability to operate well beyond Canada's littoral waters.”

(Mayne 2009, 153-4; also see Milner 2010, 224; Plamondon 2010)

Built by Davie Shipbuilding in Lauzon, Québec, *Provider* was the sole ship of its class. In December 1966, contracts for two Protecteur-class AORs were signed: HMCS *Protecteur* (AOR 509) was delivered in 1969, and HMCS *Preserver* (AOR 510) was delivered in 1970 (Milner 2010, 260-265). Both constructed at the Saint John Shipbuilding and Dry Docks in Saint John, New Brunswick, *Protecteur* sailed out of Esquimalt, British Columbia, and the HMCS *Preserver* operated from the Atlantic coast. Operating beyond Canada's littoral waters was essential to an era in which the RCN was specializing in antisubmarine warfare (ASW) (Milner 2010, 260). Support ships increased the ASW capability of Canada's naval forces by enabling warships to remain at sea for longer periods without having to return for fuel, supplies and maintenance (Department of National Defence 1969). Even in an era in which Prime Ministers Lester B Pearson and Pierre Elliot Trudeau were reshaping Canada, and cutting its defence budget considerably, the support ship concept was deemed essential. Personnel cuts, the decision to forgo replacement of the wartime destroyers and frigates, and the cutting in half of Canada's naval commitment to NATO were all somewhat eased by the addition of four Iroquois-class destroyers—also known as the Tribal Class DDH-280s—and the two AORs (Haydon 2009, 163-5; Milner 2010, 266).

With the fall of the Berlin Wall, the RCN's prime focus on ASW crumbled. In addition, essentially unchanged since 1975, Canada's fleet had rusted out. Upgrade plans like the Tribal Update and Modernization Program were to further diminish the fleet's capacity for the next half-decade. However, when Saddam Hussein's Iraqi forces invaded Kuwait in August 1990, Canada's response was peculiar but effective. According to Richard Gimblett, many anticipated

a post-hostilities army peacekeeping force. Instead, Canada's immediate contribution included the *Athabaskan* destroyer, the *Terra Nova* frigate, and the *Protecteur* supply ship. Hastily upgraded with new command and control (C2) systems, as well as modular weapons such as the Phalanx Close-in Weapon System, an anti-missile Gatling gun, and Harpoon anti-ship missiles, the deployment proved highly successful. In fact, the accomplishment of the deployment largely contributed to a novel idea in transforming the RCN (Gimblett 2009, 185-90).

Over the next two decades, the RCN—a navy once confined mainly to ASW operations in the Atlantic and Pacific—was continually redeployed to the tropical waters of southwest Asia (Milner 2010, 313). Central to the success of this newfound responsibility was the addition of American satellite communications and computerized command and control tools, as well as the ever necessary supply ship role. In fact, in the fall of 1992, as Somalia continued to descend into failed state status, HMCS *Preserver* was deployed to support the Canadian Airborne Regiment's distribution of humanitarian aid. Problems ensuring a secure onshore headquarters resulted in the need to reconfigure *Preserver's* operation's room to serve as a floating JHQ. Although the overall Somalia mission was shrouded in heinous scandal and national embarrassment, the partial transformation of *Preserver* into a tri-service JHQ was an extraordinary outcome of the mission (Milner 2010, 312). The RCN internalized this concept, leading to the idea that any replenishment ship replacement must include the ability to act as an afloat JHQ. With the advantage of hindsight, Gimblett notes the Joint Support Ship Project—which began in the late 1980s as the Afloat Logistics Sealift Capability Project—was impeded by this new requirement²⁷ (Gimblett 2009, 187-92; Milner 2010, 313; Sloan 2013, 18).

²⁷ Bercuson, Plamondon, and Szeto note the ALSC Project “evolved into the JSS Project” without explanation of the change in name (2006, 30). As Sloan explains, the name was changed in the early 2000s “because of the decision to integrate capabilities beyond naval refueling and replenishment.” The JSS Project sought to integrate refueling and

The project: build in Canada, no matter how impractical

Acknowledged in the Mulroney government's defence white paper was the obsolescence of Canada's naval vessels. Seen as insufficient in 1987, not to mention fifteen years in the future, the paper emphasized the importance of pursuing "a vigorous naval modernization program." (Department of National Defence 1987, 51) And modernization was largely successful. As Marc Milner argues, between 1990 and 1996, "virtually the entire fleet was replaced." With the exception of Canada's supply ships, by 2000, the navy was the "most modern and versatile of the nation's armed forces." (Milner 2010, 304).

The Chrétien government's defence white paper was released in December 1994. Earlier in the year, MIL-Davie—owned at the time by the Québec provincial government—expressed grave concern with its prospects for future contracts and by extension, its survivability. To alleviate the problem, the company proposed the federal government spend roughly \$300 million to purchase a ferry for the Magdalen Islands route, modernize MIL's dry docks, and acquire a prototype for a new fleet of supply ships for the Canadian Forces. Although the bid was unsolicited, MIL president Guy Veronneau insisted it was not a subsidy, stating, "(these ships) are something than [sic] can be useful for government." (McKenna 1994) In Ottawa, Bloc Québécois member Gilles Duceppe accused the Liberals of ignoring MIL, blaming Davie's impending crisis on the federal government's inability to help the defence industry transition to non-military production (McKenna 1994).

Of course, MIL was not the only company interested in building supply ships. Speaking on behalf of the Western Shipyard Consortium—comprised of Kvaerner Masa Marine

resupply, a command and control function for operations ashore, and a sealift capability for transporting ground forces and their equipment (2013, 18).

Incorporated, Allied Shipbuilders Limited, Vancouver Shipyards Company Limited, and BC Research—president of Kvaerner, Peter Noble, stated, “The contract should not be used to prop up some obsolescent old shipyard” (Wilson 1994). Noble’s alternative strategy included Ottawa developing its own detailed design for a logistics ship, and then open a nation-wide competition to decide the best proposal. The idea was over a decade ahead of its time. Even though a recent Senate-Commons review of military policy had recommended the purchase of an estimated \$4 billion worth of equipment including supply ships, the 1994 defence white paper did not make this item a vital concern. It only stated the HMCS *Provider* would be retained—even though it was slated to be paid off in 1996—and plans to replace the AOR fleet would be “considered.” (Department of National Defence 1994, 36) MIL-Davie was out of luck, and BC shipbuilders would have to wait to build anything new.

The Western Shipyard Consortium was already in the midst of a very successful refit of HMCS *Protecteur*, the Esquimalt based supply ship. Ottawa granted the refit to compensate for the cancellation of the Polar 8 icebreaker. As Dan Quigley of the Dockyard Trades and Labour Council remarked, “It was our turn” (McCulloch 1995). And they made the most of the opportunity. By August 1995, the two year, \$61 million refit was complete, two months ahead of schedule and under budget. Designed to add another ten years to the *Protecteur*’s lifespan, the ship was completely stripped and rebuilt, adding updated satellite systems, helicopter cranes, sewage treatment systems, and weaponry. According to navy captain Bert Blattmann, the commanding officer of Ship Repair (Pacific), with “enhanced capability of command and ground”, *Protecteur* became “more than a supply ship.” (McCulloch 1995; also see Department of National Defence 2017a)

However, Canada's supply ship deficit did not end. It worsened. Partly because it was at the end of its service life, and partly because the Liberal government wanted to free up money to purchase four of Britain's Upholder Class diesel electric submarines, the thirty-five year old HMCS *Provider* was decommissioned in June 1998²⁸ (Manthorpe 1998; Hobson 1998; Globe and Mail 1998). If not understood by Art Eggleton, whom viewed *Provider's* retirement—along with eight other ships—as amounting to \$160 million in savings, Captain John Dewar, director, maritime concepts and doctrine, saw it differently: “there is some urgency now about replacing that whole capability.” (Hobson 1998; Manthorpe 1998) With this need in the collective mind of defence planners, contemplation of the Afloat Logistics and Sealift Capability ship began with capabilities consultations between Canada's three military branches (Hobson 1998). But movement on this file was slow. Chrétien refused to increase funding to the military, focusing instead on balanced budgets (McGregor 2015).

Finally, “the wire snapped.” Historian Jack Granatstein argued Canada's maritime preparedness shortfall was symptomatic of a holistic, military shortfall (Granatstein 2002b). Not only was the navy experiencing significant personnel shortages—around 5,000 to 8,000 by 2002—Kosovo in 1999, and the growing campaign against terrorism exposed the institutions inability to maintain operational tempo (Granatstein 2002a). In particular, a 2002 Department of National Defence study argued Canada's unhealthy reliance on private companies for transport of military equipment exposed a “national vulnerability” (Pugliese 2002). During the 1999 Kosovo bombing campaign, Italian authorities denied a Soviet-era Antonov transport plane packed with Canadian equipment to land in Italy, until Canadian diplomats got involved

²⁸ Built in Lauzon, Québec, and commissioned in 1963, *Provider* was based in Halifax for the first six years of its life before spending twenty-seven years on the West Coast. The ship returned to Halifax in 1996. (Globe and Mail 1998)

(Pugliese 2002). In a separate incident, Third Ocean Marine Navigation of Maryland held a group of Canadian soldiers, 550 Canadian Forces vehicles, and 350 sea containers of Canadian military gear and ammunition hostage over a contract dispute with Montréal charter company, Andromeda Navigation. The American company was hired to transport Canadian gear from Kosovo to Montréal in June 2000, but was ordered by management to “circle in one position outside Canadian waters” until negotiations over the dispute were finalized.²⁹ (Pugliese 2000) With no solution in sight, the Canadian government ordered the ship seized by armed Canadian sailors in August 2000 (MacAfee 2000).

If those debacles did not grab Chrétien’s attention, it seemed nothing would. A House of Commons defence committee recommended a massive increase in naval shipbuilding, in order to rebuild a suffering Canadian Forces, as well as guarantee a steady stream of work for Canadian shipyards (Morrison 2002). The committee was unanimous in its call for a \$6 billion increase in defence spending over three years, including new supply ships, heavy-lift aircraft, and new destroyers. However, the prime minister argued tax cuts, pressure to shore up Canadian industries threatened by US trade actions, and a recent increase in the defence budget were placing onerous demand on the federal treasury. Liberal MP David Pratt, chairman of the defence committee, was correct in arguing the demands on the Canadian Forces, with its anti-terror operations in Afghanistan, peacekeeping in Bosnia, and patrol and resupply duty in the Persian Gulf, were unsustainable without new funding thresholds. Pratt frustratingly stated “Our foreign policy is writing cheques our defence policy can’t cash.” (Naumetz 2002) Moreover, as

²⁹ The Department of National Defence contracted SDV Logistics Canada of Montréal to ship military gear from the former Yugoslavia. SDV then subcontracted the job to Andromeda Navigation. Third Ocean Marine's GTS Katie was hired for the voyage, but kept the Katie in international waters off Newfoundland for two weeks after claiming it was owed about \$190,000 by charter company Andromeda Navigation of Montréal. (Pugliese 2000; MacAfee 2000).

the Canadian army prepared to return to Afghanistan in the summer of 2003, a report by the Royal United Services Institute of Nova Scotia—a defence lobby group—concluded hitching rides on foreign military aircraft and leasing ships costed the Canadian Forces \$80 million since 1999, not to mention threats to national security and sovereignty. The institute recommended the federal government build four of its own ships at a cost of roughly \$100 million apiece, avoiding the pitfalls of contracting foreign owned transport companies (Brewster 2003).

In 2003, the idea the Canadian Forces needed improvement began to catch-on. Think tanks across the country advocated on behalf of a struggling CF, to a more receptive prime minister³⁰ (Granatstein 2011, 427). In December 2003, the same month Paul Martin assumed the role of prime minister, *Preserver* was scheduled for a one year, \$18 million, dry dock refit, leaving *Protecteur* on double duty (Pugliese 2003). Promoted to Minister of Defence, Liberal member David Pratt was strongly in favour of increasing military spending, and funneling a considerable sum towards replacing the supply ships. Despite trouble finding spare parts for the aging supply ships, Treasury Board president Reg Alcock argued each federal department, including defence, should pare \$1 billion a piece in anticipation of the forthcoming budget (Pugliese 2004). Knowing this would have placed the supply ship replacement in an untenable situation, Pratt advocated strongly on behalf of defence, noting his department had already ceded \$200 million earlier that year (Ward 2004). Three months later, nearing the 38th General Election—which was held 28 June 2004—the Liberal government announced an investment of

³⁰ Paul Martin became prime minister 12 December 2003 when he succeeded Jean Chrétien. That same year, Canadian think tanks and advocacy groups (eg the Conference of Defence Associations, the Council for Canadian Security in the 21st Century, the CD Howe Institute, the Canadian Defence and Foreign Affairs Institute, the Institute for Research on Public Policy, the Canadian Council of Chief Executives, and the Fraser Institute) vocalized what many already knew: the Canadian Forces was in a state of decay (Granatstein 2011, 427).

between \$6 billion and \$8 billion in Canada's military, including \$2.1 billion³¹ for the purchase of new supply ships. Sources told *Canwest News Service* that Martin wanted to avoid future embarrassing scenarios like the sixteen-day standoff at sea between the government and Third Ocean Marine (Dawson 2004).

During Rick Hillier's first month as CDS in February 2005, the general articulated an ambitious transformation program for the Canadian Forces. Recalling Canada's success with the JHQ concept during the ill-fated Somalia mission, Hillier advocated on behalf of a support ship large enough to transport troops and their equipment, and serve as a command post during foreign operations (Blanchfield and Pugliese 2005). Included in the federal budget, released later that month, was \$12.8 billion in new military spending over five years (Department of Finance 2005, 221). Unfortunately, the bulk of that money was not scheduled to start flowing until 2008 (Guelph Mercury 2005). Meanwhile, HMCS *Preserver*, the supply vessel parked in a Halifax dry-dock one year prior and scheduled to be ready in November 2004 was released in January, only to experience serious electrical problems that forced it back to port.³² Although the problems were not related to the \$40 million worth of upgrades, the ship was again out of commission for many months (Canadian Press 2005). With this in mind, a senate defence committee led by Liberal chairman Colin Kenny, argued the military's slice of the federal budget (\$14.3 billion in 2005) was anemic given the shortfall in equipment and personnel. The report argued in favour of \$25 billion to \$35 billion per year in spending. Defence Minister Bill Graham objected. Noting the last federal budget gave the military its biggest increase in twenty years, Graham explained his discussions with generals, admirals, and experts led him to conclude

³¹ The figure of \$2.1 billion appears to have been a starting point. Sources citing how much different governments would spend on new supply ships varied mainly between \$2.6 billion and \$2.8 billion.

³² HMCS *Preserver* was originally slated to be ready in late November 2004 at a cost of \$18 million (Brewster 2005).

the military can only absorb so much money at one time. In other words, doubling the budget would not generate an instant solution to the equipment shortage. Procurement takes time (Ward 2005).

With the January 2006 election of Stephen Harper's Conservatives, Paul Martin's government did not have the chance to unleash its five-year military spending spree. The Conservatives decided however, the \$12.8 billion was a figure they could live with (Brewster 2006). The order of operations was predictable. During the election campaign, both Martin and Harper pledged to renew the military with key procurement projects. Once elected however, Harper initially postponed any spending until cabinet could determine its priorities (Wattie 2006); politics is about optics and Harper was concerned implementing a Liberal-designed military modernization plan would irk his voting base, calling into question the originality of his party's defence spending objectives (Pugliese 2006a; Pugliese 2006b). Another way of looking at it is the Conservative government's minority status made large acquisition lists politically risky, even though the Liberals had promised to do the same (Canadian Press 2006). Meanwhile, intent on making Canada's military more operationally effective, Hillier pressured the government—namely Minister of National Defence Gordon O'Connor—to follow through on his party's election promise to renew the military (Campion-Smith 2006). In light of Afghanistan, Hillier was less focused on support ships than troop transport helicopters and larger cargo aircraft. By May however, Minister O'Connor had successfully convinced his cabinet to allocate roughly \$15 billion to six primary procurement projects. Chief among them was \$2.8 billion for three joint support ships (Brewster 2006; Sloan 2014, 29). When O'Connor finally made the announcement in June, defence journalist David Pugliese commented the matter of “new supply transport ships for the navy is a case of *déjà vu* of the first order.” (Pugliese 2006b) As

mentioned, the Liberal government made the same announcement in April 2004. Interestingly, both announcements included similar details—quantity, price, and timeline—and Vice-Admiral Ron Buck standing fast in the backdrop. As Pugliese remarked, “in a savvy public relations move, the Conservative government has embraced the joint support ship program as its own, highlighting it as evidence of its commitment to rebuild the Canadian Forces.” (Pugliese 2006b).

The Conservative government was intent on rebuilding the forces, yet so many needs had piled up it was difficult to prioritize the priorities. While companies eager to engage the government in the design, construction, and long-term in service support of the Joint Support Ships were finalizing proposals (Canada Newswire 2007), melting ice compelled Stephen Harper to highlight Arctic security in his government’s defence agenda. During the election campaign, the Conservatives had indicated they would purchase icebreakers to patrol the Arctic. By January 2007, a leaked version of the Canada First Defence Strategy had made its way around Ottawa, and across the country. Although it was a preliminary draft, and thus items were being reviewed and revised, the idea of scrapping *Preserver* and *Protecteur* to free up money for armed icebreakers generated serious criticism, and echoed Chrétien’s rationale for retiring *Provider* to purchase used submarines. (Canadian military procurement often involves difficult capability trade-offs.) Eric Lerhe, a retired commodore, argued abandoning *Preserver* and *Protecteur* in 2010, two years before the absolute earliest possible launch of a new support ship was a “hare-brained” idea (Lambie 2007). Senator Colin Kenny also questioned the logic of operating a navy for two or more years without supply and refueling ships (Pugliese 2007a). Liberal Member of Parliament Keith Martin was unequivocal: “This a very stupid move” (Saanich News 2007). Professor Michael Byers was pleased. Having argued for the necessity of icebreakers himself, Byers believed “the military successfully lobbied the government to shift gears.” Moreover, he

argued it was more cost-effective to use patrol vessels instead of icebreakers in a region without “much in the way of threats or opportunities for collaboration with allies.” (Calgary Herald 2007) That summer, government officials indicated six to eight Arctic patrol ships were estimated to cost \$3.1 billion, plus another \$4.3 billion for operations and maintenance over a twenty-five year lifespan (Pugliese 2007b). Savings needed to be found somewhere, and scrapping the *Preserver* and *Protecteur* was one way of achieving that (Pugliese 2007a).

To make matters worse, by May 2008 it was clear the \$2.8 billion earmarked for the JSS Project was insufficient to match the ambitious scope of the project, not to mention the cost of steel that Peter Cairns—president of the Ottawa-based Shipbuilding Association of Canada—argued had “gone up by around 30 per cent annually... since the budget was set years ago for the ships” (Pugliese 2008b). The Canada First Defence Strategy was officially released the same month with only one brief mention of the JSS (Department of National Defence 2008, 16). The emphasis was instead placed on stable, predictable funding, increasing the annual defence budget from \$18 billion in 2008 to \$30 billion in 2028 (Department of National Defence 2008, 4, 16). In line with the message of stability, the idea behind the JSS was to build a modern, multirole vessel capable of meeting Canada’s defence needs, “both at home and abroad”, in the near and distant future (Department of National Defence 2008, 16). Representatives from private industry told DND officials \$2.8 billion was likely enough for two ships, but certainly not three. Senator Colin Kenny immediately jumped on this. Arguing two ships would be unacceptable and unworkable because one vessel is often docked for regular maintenance, the chair of the Senate’s committee on national defence and security also ridiculed the government for the number of capabilities expected from the ships (Pugliese 2008a). On the evening of Friday 22 August, Public Works Minister Christian Paradis quietly announced online his government’s decision to

reject the bids it had received for the JSS Project. Noting the support ships remained a priority, Paradis emphasized “the government must ensure that Canadian taxpayers receive the best value for their money.” (Brewster 2008a; also see Pugliese 2008c; Sloan 2014, 29). Of course, Canadian industry had to be part of that equation.

In early August 2008, an official from Dan Ross’s office accompanied retired rear admiral Ian Mack to a Dutch shipyard to review purchasing options. Industry officials such as Peter Cairns expressed concern about buying overseas, noting it would not only be bad for the Canadian economy, but signal a major change in policy. Industry Canada spokesperson Stefanie Power remarked that in June 2007 the government announced a “Renewed Approach to Shipbuilding in Canada” to assist the country’s shipbuilding industry, both in terms of current challenges as well as its longer term needs. In an email, Power wrote that under the “Buy Canada” policy the federal government pledged to procure, repair and refit vessels in Canada, thus supporting a competitive domestic marketplace (Pugliese 2008b). By the end of August, Minister of Defence Peter MacKay announced his government’s plans to “restart the process and get that ship building underway very quickly” assuring his political opposition, such as NDP fisheries critic Peter Stoffer, the JSS Project would be Canadian made (MacMillan 2008). One month later, as Canada’s economy began to feel the effects of a major global financial crisis, Canadian shipbuilding became part of the Conservative government’s means of injecting stimulus, the bonus being most of the funds had been set aside in previous budgets (Brewster 2008b).

In mid-January 2009, a bi-partisan group of opposition MPs from Nova Scotia stood at Irving’s Halifax Shipyard to urge the government to help stimulate the economy by injecting billions of dollars into Canada’s shipbuilding industry. A month before, the stimulus seemed to

be a forgone conclusion. The unlikely allies included Liberal member Geoff Regan, independent Bill Casey, and NDP members Peter Stoffer and Megan Leslie (MacDonald 2009). Less than two weeks later, when the 2009 budget was released, it included a meagre \$175 million “for the procurement of new Coast Guard vessels and to undertake vessel life extensions and refits for aging vessels.” (Department of Finance 2009, 172) Some expressed concern. In February, accusing the Conservative’s budget of leaving the country’s major shipyards high and dry, Stoffer described the announced construction of lifeboats and barges as “the canoe brigade.” In particular, Stoffer was appalled with the omission of the \$2.1 billion Joint Support Ship Project (Pugliese 2009a).

Senator Kenny penned an op-ed in the *Times Colonist* arguing cessation of the JSS Project “threatens naval renewal.” (Kenny and Rompkey 2009). The senator’s concern was the government’s inability to progress a project as essential to Canada’s security as the JSS was symptomatic of a larger strategic failure (Brewster 2009b). He was not wrong. Between 2004 and April 2009, DND’s JSS office spent \$44 million on training, travel, office furniture, bilingual bonuses and other project office support costs, with nothing to show for it. There was even talk of scuttling the designs for the multipurpose support ships and starting over with something more basic (Pugliese 2009b). But Minister MacKay agreed with Kenny. At a two-day conference in Gatineau in late-July 2009, the Conservative government gathered Canada’s shipbuilders and defence contractors to discuss its shipbuilding needs, including the number and type of vessels required, and how much it was prepared to spend. MacKay repeated what everyone already believed: that a long-term building strategy would not only provide companies the stability to avoid boom-and-bust cycles, but also avoid the predicament of retiring ships before a replacement is available (Brewster 2009a; Pugliese 2009c). MacKay followed his own

advice. In September, he travelled to Australia to examine the country's procurement system and look for ideas. Having partially revamped its procurement system in 2003, a 2008 report added the recommendation Australia's Defence Materiel Organization adopt business like practices, imposing "commercial discipline", and cultivating public-private partnerships to more effectively sustain equipment programs. MacKay insisted that whatever he learned, project solutions would be Canadian made (Brewster 2009c).

Finally, on 3 June 2010, a host of Conservative government ministers stood side-by-side as they announced a thirty-year, \$35 billion, National Shipbuilding Procurement Strategy (NSPS). The NSPS sought to establish a long-term strategic relationship with two Canadian shipyards for the construction of twenty-eight large ships, both combat and non-combat vessels. (Although the support ships were included in the non-combat package, they were envisioned as naval vessels.) The selection of the two shipyards was to be conducted in a fair, open, and transparent competition spanning all viable shipyards across the country. To accomplish this, the government implemented a novel approach. Designed to prevent political influence, the winning shipyards were to be selected by an NSPS Secretariat—a high-level, arm's length decision making committee headed by the deputy minister of Public Works. The Secretariat also included deputy ministers from DND, Fisheries and Oceans, and Industry Canada. KPMG was included as an oversight firm to "help develop selection criteria and processes that are reasonable and defensible" (Blanchfield 2011). The government also hired First Marine International, a marine industry consultant in the UK, to help judge the final shortlist of bidding Canadian shipyards.³³ (Public Services and Procurement Canada 2010; Brewster 2010; Ring 2016, 3).

³³ The NSPS at that time was hailed as a successful example of a procurement process kept at arms length from the elected government. As journalist Kristy Kirkup noted in October 2011, "Public Works Minister Rona Ambrose has said the decision is completely out of the government's control and cabinet not is [sic] involved in the process.

To make the announcement, Minister of Public Works Rona Ambrose was joined by Minister of Defence Peter MacKay, Minister of Fisheries and Oceans Gail Shea, and Minister of State, Denis Lebel. Addressed in the press release, the government decided that after extensive “consultations with industry stakeholders” a “strategic relationship with Canadian shipyards” was essential for several reasons. Discussing the military aspect, MacKay noted this “strategy” would allow Canadian industry to help deliver on the Canada First Defence Strategy, providing the navy with the modern ships needed to defend Canada’s interests at home and abroad. Ministers Shea and Lebel commented the strategy was good for job creation, applauding the plan as a “smarter, more effective way” of strengthening the marine sector while providing value for Canadians. Ambrose stated “Our Government made the decision to support the Canadian marine industry, to revitalize Canadian shipyards and to build ships for the Navy and Coast Guard here in Canada”. Even though MacKay emphasized the importance of the combat vessels as well as the support ships, the “strategy”, was less about security, and primarily geared towards improving the state of shipyards across the country by eliminating boom and bust cycles through long term, predictable funding (Public Services and Procurement Canada 2010).

However, the announcement was not received with complete fanfare. NDP member Peter Stoffer was concerned the competition would lead to a wasteful battle among Canada’s shipyards. “You could have the West Coast and East Coast spending millions of dollars fighting each other over these competitive bids”. Stoffer argued that alternatively the government could work with industry, saving money to build “ships instead of beating each other over the head in the competition.” (O’Neill 2010) Stoffer was unspecific about what he meant by the government

The procurement is under the watchful eye of high-level oversight committees and a fairness monitor. Government sources are so concerned about leaks and any appearance of bias in the process that they won’t confirm it and refer all calls to the shipbuilding secretariat.”

working with industry, and Irving president Steve Durrell was confident in what the Conservatives had proposed (Quentin 2010a). The government proceeded with its plans.

In mid-July, MacKay announced the planning process to build the supply ships was underway, citing a \$2.6 billion purse for two ships with the option to procure a third. Before any steel could be cut, the design phase was envisioned as a two-year process involving consultations between government and industry officials. MacKay's spokesperson specified the entire project was to be completed between 2017 and 2018 (Calgary Herald 2010; Stone 2010). By October the government announced a shortlist of shipyards it was considering to build the large vessel portion of the NSPS. It included Irving Shipyards of Halifax, Vancouver Shipyards, Seaway Marine & Industrial of St Catharines, Ontario, the Québec-based Davie Yards, and Peter Kewit in Marystown, Newfoundland. The two winning shipyards were to be announced the following spring (Quentin 2010b; Ring 2016, 3).

It was not until October 2011 when a government bureaucrat named the shipyards selected to enter negotiations for the NSPS contracts. During the preceding summer, two shipyards had already surfaced as leading contenders. In July, British Columbia's Pat Bell, Minister of jobs, tourism and innovation, announced his government would provide \$35 million in training and labour tax credits to Seaspan if it won a contract. Just prior to that, Nova Scotia offered a \$20 million loan to help Irving modernize its Halifax dry dock (Drews 2011; Van Praet 2011). Davie was not nearly as lucky. Owing more than \$60 million to some 300 creditors, in February 2010 the Lévis-based company filed for protection from creditors under the Companies' Creditors Arrangement Act. It also laid off over 1,500 employees, working with a skeleton staff of around 150 (Montreal Gazette 2010; Cardwell 2010). When this happened, Italian shipbuilder Fincantieri tried to acquire Davie while the Québec government provided

more than \$27 million in loans to cover the beleaguered company's costs. However, citing concerns with the NSPS's 21 July 2011 deadline, Fincantieri pulled its offer in the spring of 2011. Montréal's SNC-Lavalin Group Incorporated, an Ontario partner known as ULG, and South Korea's Daewoo, granted the company another lifeline in July and that same month the Québec government offered Davie another \$18.7 million in repayable loans. Davie was able to submit its bid, but it was too little, too late (Gibbens 2011a; Drews 2011; Van Praet 2011; Gibbens 2011b).

On 19 October 2011, Seaspan was awarded the opportunity to enter negotiations to build the non-combat portion of the NSPS. That is, for \$3.5 billion, Seaspan would build two support ships (\$2.3 billion), as well as one polar ice breaker and four offshore science vessels. On the opposite end of the country, Irving Shipbuilding became the prime contractor for the navy's combat vessel package. At \$29.3 billion, Irving would build six arctic patrol ships, and fifteen surface combatant ships (Brewster 2011; Office of the Auditor General 2013, 6). However, the competition between Canada's top three naval yards was not over.

As the *Toronto Star's* Québec correspondent Allan Woods wrote, "the decision to shut out Québec's Davie Shipyards... stoked anger and resentment" and the "reaction from that province was swift and furious." (2011) Bloc Québécois MP Andre Bellavance argued Québec was a perpetual loser when it came to federal military contracts. Québec television networks aired programs showing outraged residents from Lévis, home to Tory MP Steven Blaney. Lévis residents were calling for the Conservative member's head, saying his party should pay a political price for the decision. Hailed as an arms-length process, free from political interference, the bids were evaluated by four senior bureaucrats, overseen by a third-party accounting firm. All three companies had entered the competition in agreement with the rules and parameters of

the process (Watson 2011). Deputy Minister of PWGSC, Francois Guimont, stated “The three bids were all good submissions. We simply took the two best” (Woods 2011). Government officials even claimed the companies learned of the news before the prime minister. Yet, it was an emotional day “fraught with possible political repercussions for Prime Minister Stephen Harper's Conservatives.” (Woods 2011) The interim leader of the federal NDP, Nycole Turmel, questioned why there was a competition at all, arguing there was enough work for everyone, in Halifax, British Columbia, and Québec. Turmel acknowledged herself that she was no expert on naval shipbuilding, but Peter Stoffer was. Stoffer had been the NDP's shipbuilding critic for fourteen years, and had been an advocate of building ships in Canadian yards, and selecting these yards in a non-political competition. Stoffer was magnanimous. Following the announcement in the National Press Theatre, Stoffer publicly thanked the federal bureaucracy, essentially contradicting his party leader (Maher 2011; Riley 2011).

Less than one year later, the NSPS was already running into problems. As journalist Lee Berthiaume wrote, “At issue is a three-way struggle pitting the military's desire to acquire as many state-of-the-art vessels as possible against the government-imposed Defence Department budget cuts—and industry's focus on the bottom line.” (2012a) Political science professor Philippe Lagassé noted at the time that while the Conservative government focuses on fiscal austerity, it appears content to let DND and Industry Canada argue over the details of the shipbuilding strategy. Slightly disingenuous about the whole thing, Prime Minister Stephen Harper continued to applaud the NSPS as evidence Canada was being returned to its glory days as a global shipbuilding power, and that construction was progressing on schedule (Berthiaume 2012a). The Parliamentary Budget Office saw things differently. Even before October 2011, when Irving and Seaspan were awarded the opportunity to engage in negotiations for the NSPS

contracts,³⁴ Liberal defence critic John McKay asked PBO officials to study the shipbuilding plan. With evidence the government withheld information about the full cost of the F-35 fighters fresh in their minds, in August 2012, PBO opened an investigation into the JSS portion of the program (Berthiaume 2012b).

Prior to its 28 February 2013 release date, the PBO report was scrutinized by an independent, peer review panel comprised of two American university professors, an analyst from the US Congressional Budget Office, a Technical Director from the Danish Defense Acquisition & Logistics Organization, and a Senior Cost Analyst from the US Government Accountability Office. The objective of the report was to determine if the \$2.6 billion budget allotted by the Conservative government was sufficient to cover all of the acquisition costs of replacing the two *Protecteur*-class AOR ships. The conclusion reached was “The budget envelope of \$2.6 billion is unlikely to be feasible given Canadian shipyard realities, schedule constraints, and likely ‘unknown-unknowns’ that have yet to be identified.” (Office of the Parliamentary Budget Officer 2013a, 22) PBO placed the actual cost at around \$4.13 billion. The reaction was predictable. Liberal defence critic John McKay argued the report confirmed the Conservative government’s “fiscal incompetence when it comes to military procurement; incompetence that directly jeopardizes Canadian jobs as well as the capabilities of our navy” (Brewster 2013a). Regarding the PBO suggestion the supply ship capabilities may need to be scaled back to fit the Conservatives more austere funding envelope, NDP procurement critic Matthew Kellway asked: “With their stated budget are we going to be left with nothing more

³⁴ Terry Williston, the head of the group of senior bureaucrats that selected Irving and Seaspan, noted the two shipyards had not actually won a contract to cut steel. “We’ve selected the two shipyards with which Canada will engage in negotiations for the contracts that are part of the NSPS work packages. But there’s a tremendous amount of difficult work to be done in order to get to those contracts.” (Berthiaume 2012a)

than two tug boats painted grey?” (Brewster 2013a). Defence Minister Peter MacKay and PWGSC Minister Rona Ambrose responded with vague and underwhelming assertions things were fine. MacKay said the ship’s design will undergo a costing review, but insisted new ships will either “match or surpass” the current vessels (Brewster 2013b1). Defending the government’s estimate in the House of Commons, Ambrose argued what mattered was that appropriate safeguards—such as independent oversight and expertise—were in place to ensure affordability and “protect taxpayers” (Brewster 2013b2; House of Commons Debates 2013).

Vancouver’s Seaspan was not happy with the report either. However, although Parliamentary Budget Officer Kevin Page, was critical of the Conservative government’s fixed estimate of \$2.6 billion—wondering where that figure even came from—and Seaspan’s relative inexperience, an episode of *CTV’s Power Play* revealed Page to be quite measured. He stated the \$2.6 billion estimate for two ships was “in some ways... not that far off... when you escalate for inflation.” (Martin 2013) Page estimated the replacement cost at around \$3.2 billion, but added a contingency cushion of more than \$900 million to account for the engineering complexity of the project and a lack of recent experience at Seaspan in building similar vessels (Brewster 2013a; Brewster 2013b1). Seaspan CEO, Jonathan Whitworth, was offended: “We find the report a bit strange and baffling.” Whitworth acknowledged the contract is the largest his shipyard has undertaken, “but took offense to the notion that Seaspan isn’t skilled enough to produce the ships.” (Smith 2013) Pointing to Seaspan’s forty-one new hires—including engineers, managers, and specialists from United Kingdom shipyards—his rebuttal, albeit emotional, had more substance than MacKay and Ambrose’s. “Those hired have experience building destroyers and aircraft carriers in the U.K... They’ve done exactly what we’re going to be building... I do not feel we have a skill gap here at all.” (Smith 2013)

Officials at DND also rejected PBO's analysis. A leaked briefing note prepared for Peter MacKay and Rona Ambrose argued PBO's report was more theoretical than practical, and even though the agency used a sophisticated software model to make its projections,³⁵ DND's numbers were more advanced than the budget officer's. The Conservative government was also less interested in maintaining the litany of capabilities originally envisioned for the JSS than ensuring affordability. In the House of Commons, Ambrose assured Canadians the \$2.6 billion was "carved in stone", leading CGAI (Canadian Global Affairs Institute) analyst Dave Perry to point out that certain capabilities would need to be cut from the plan (Brewster 2013c). Sure enough, in June, when the government selected ThyssenKrupp Marine Systems Canada over BMT Fleet Technology, fifteen percent cost savings were cited as a primary rationale. Having built the selected model for the German navy, ThyssenKrupp also offered expertise and greater budgetary certainty for the RCN (Seyd 2013a). The problem was the RCN's original plan was to have the new ships serve as a floating supply base for both the navy and the army, as well as an offshore command post and hospital for humanitarian missions. In its description of the new design, DND mentioned the ships would "provide a home base for maintenance and operation of helicopters, a limited sealift capability, and support to forces deployed ashore." (Canadian Press 2013) Unclear was the degree to which the new design would incorporate original plans. A new construction timeline estimated Seaspan would begin building the support ships in late 2016, finishing sometime between 2019 and 2020 (Brewster 2013d). Meanwhile, NDP defence critic Jack Harris argued the delayed schedule was the result of the Conservative government's

³⁵ Although the PBO's \$4.13 billion figure was based on calculations from a sophisticated software model in use around the world, most notably with the US Government Accountability office and Britain's Ministry of Defence, DND argued its figures were more advanced, based on "actual cost estimates" for designs contributed by naval contractors (Brewster 2013c).

cancellation in 2008. Senator Colin Kenny criticized the Conservatives for their perceived inability to budget (Kenny 2013).

Criticism continued with the November release of the Office of the Auditor General's fall 2013 report. Part of it focused on the National Shipbuilding Procurement Strategy, mainly to determine whether the federal departments engaged in the program were managing the file in a way that would "help sustain Canadian shipbuilding capacity and capability to procure federal ships in a timely, affordable manner." (Office of the Auditor General 2013, 25) Auditor general Michael Ferguson credited the government for a successful and efficient selection process, independent of political influence, but criticized the inflexibility of the costing assessments, concluding the allotted budgets would be insufficient to acquire the ships originally envisioned in the program. The same was said for the JSS aspect of the program.³⁶ Namely, a mix of rising labour and material costs and a rigid budget resulted in capability trade-offs, and a total lack of funds for a third ship. The OAG expressed concern over "Canada's ability to respond autonomously to crises and contingency operations." (Office of the Auditor General 2013, 20; also see Brewster 2013e; Seyd 2013b) The concern became a reality sooner than anticipated.

By early 2014, it was becoming clear the RCN would face a strategic gap in its near future. To balance the federal budget, the Conservative government slashed \$3.1 billion from defence, and talk of reducing the number of ships the NSPS program produced annually was circulating (Brewster 2014a). Construction of the JSS at Seaspan in Vancouver had not begun, and the RCN's two remaining AORs were marked for early retirement after *Protecteur* suffered

³⁶ A second PBO report was released in December 2013. Responding to a question posed by a parliamentarian about the cost of the JSS accounting for "optimal conditions"—referring to a construction team with "extensive experience... familiar with the product"—PBO estimated a twenty-one percent decrease in costs (ie \$2.59 billion instead of \$3.28 billion) (Office of the Parliamentary Budget Officer 2013b, 1).

a massive engine room fire off the Hawaiian Islands in February, and considerable corrosion had been found on *Preserver*'s hull. (They had originally been scheduled to retire sometime in 2016.) (Berthiaume 2014). In the wake of this assessment, Vice-Admiral Mark Norman received an unsolicited bid for an interim supply ship from Davie in Québec (Brewster 2014b).

A May 2015 DND document—which noted the JSS Project date of completion was changed from 2012 to 2019 and again to 2021—warned about additional costs and further delays for the JSS, requiring “significant redesign work to ensure project affordability or necessitate additional project funding before implementation.” (Pugliese 2015) That same month, Davie promised it could retrofit a commercial tanker within sixteen months and lease it to the government for \$35 million to \$65 million per year (Chase 2015). The Conservative government took the offer seriously. The year 2015 was an election year, and the Conservative's procurement record was a matter of debate (Fletcher 2015). On an episode of *CTV's Power Play* with Don Martin, Liberal defence critic, Joyce Murray, ridiculed the government for an inability to deliver defence procurement projects on time and on budget. NDP MP Murray Rankin echoed the same sentiment (Martin 2015). Although the two MPs did not exactly denounce the proposed interim supply ship, both Irving and Seaspan took issue with the decision to forgo a competition. (Seaspan continued to refute claims they could not deliver on schedule.) (Whitworth 2015; Chase 2015; Globe and Mail 2015). According to documents *Postmedia* obtained via an Access to Information request, some federal bureaucrats³⁷ viewed the Davie proposal “as a threat to the federal shipbuilding strategy” (Pugliese 2018a).

³⁷ Federal bureaucrats were generally perturbed by unsolicited offers outside the NSS over reasons of fairness. For instance, following Fincantieri's offer to build Canada frigates for a guaranteed price of \$30 billion—saving taxpayers \$32 billion and delivering in 2019—officials at PSPC commented “The submission of an unsolicited proposal at the final hour undermines the fair and competitive nature of this procurement... Acceptance of such a proposal would break faith with the bidders who invested time and effort to participate in the competitive

In June 2015, the RCN's urgent need for a supply ship compelled the Harper government to quietly change federal contracting regulations governing sole-source military purchases, granting authority to federal cabinet to award a contract to a single company in the context of urgent "operational reasons" for interim purposes (Brewster 2015a). With an election looming, the Conservative government was confident an interim supply ship, refurbished in Québec—in Conservative Cabinet Minister Steven Blaney's riding no less—was necessary to win seats in a traditionally non-Conservative province (Pugliese 2018a). In addition, Davie was under new ownership. A London and Monaco based business known as the Inoceana Group purchased the Davie shipyard, and was viewed as responsible for reinvigorating the once moribund business. Irving and Seaspan were of course occupied with the lion's share of the NSPS, and so the choice seemed clear (Cardwell 2016). On 1 August, defence Minister Jason Kenney signed a letter of intent with Davie for the interim supply ship project—Project Resolve³⁸ (Pugliese 2018b). However, when the Liberal party was elected on 19 October that year, a month later Project Resolve was placed on hold, citing concern with the sole source nature of the proposed contract³⁹ (Brewster 2015b; Pugliese 2018b). This of course caused a backlash in Québec where premier Philippe Couillard made clear that with 250 recent hires and another 400 on standby, cancelling the project was unacceptable to the province. Prime Minister Justin Trudeau listened. By the end

process." (Coyne 2017) They were not wrong, although their opposition to purchasing Project Resolve's MV Asterix was perhaps unreasonable given the RCN's operational requirement for a third supply ship. According to a September 2015 briefing note obtained by the *Ottawa Citizen* under the Access to Information law, defence bureaucrats opposed the Conservative's plan to purchase the Asterix over concerns it would make the NSS look bad. Ultimately, bureaucrats were concerned purchasing the Asterix "could create a perception that there are JSS delivery issues" and that "It would draw much needed resources away from projects under the National Shipbuilding Procurement Strategy". (Pugliese 2017c). The Conservative government ultimately overruled the bureaucrats by including the option to purchase the Asterix in the contract.

³⁸ Project Resolve was the joint plan between Davie and the Conservative government to retrofit an existing civilian cargo vessel to replenish warships at sea (Brewster 2015a).

³⁹ In November 2015, the Shipbuilding Association of Canada released a statement questioning the Liberal decision to pause Project Resolve, arguing Davie won the contract after an "exhaustive industry solicitation process" (Pugliese 2018a).

of November 2015, the Liberal government signed a deal that promised to create 1,100 jobs in the province and deliver an interim supply ship within two years (Globe and Mail 2015).

In March 2016, the NSPS was renamed the National Shipbuilding Strategy (NSS) (Public Services and Procurement Canada 2018). Slightly easier to say, the new name seemed to be indicative of the new Liberal government's resolve to improve Canadian defence procurement, or at least mitigate public perception Canada's military acquisition process is an endless "fiasco" (Granatstein 2018). In November 2015, Judy Foote, the Liberal's minister at PSPC, was tasked with "cleaning up problems with the country's shipbuilding program" and modernizing "procurement practices so that they are simpler, less administratively burdensome, deploy modern comptrollership, and include practices that support our economic policy goals, including green and social procurement." (Pugliese 2016) Other factors however, indicated continuation of the status quo (see Pugliese article Man Overboard). To be fair, Foote did oversee an increase in the dollar threshold of items DND could purchase without consulting the PSPC. Granting DND signing authority for items \$5 million and less was estimated to allow the department to manage up to ninety-one percent of its own purchases, the idea being to unburden the backlogged procurement system (Pugliese 2016). In May, Foote stated she planned to double the staff working on the NSS to address "growing pains" in the multibillion-dollar project (Blanchfield 2016). In reality, it is difficult to say whether these changes improved anything. It certainly did nothing to ameliorate the ongoing conflict that saw Irving and Seaspan attack Davie's Project Resolve. However, the attack was not unprovoked.

While the Davie shipyard was busy retrofitting the *Asterix* for supply duty with the RCN, Alex Vicefield, the Chief Executive Officer of Inoceana, an international shipping conglomerate and owner of Davie, called the NSS a "national embarrassment" (Canada Newswire 2016).

Vicefield also remarked he had never in his entire marine industry career witnessed a country so willing to spend money unnecessarily. Irving president Kevin McCoy fired back. Questioning the CEO's apparent expertise, McCoy said "It appears that Vicefield has little experience in complex military shipbuilding programs and his comments are uninformed." (Chronicle-Herald 2016) Irving even submitted its own unsolicited bid for a \$300 million conversion of a commercial vessel into a multipurpose humanitarian and supply ship. The government declined the offer (Gunn 2016). In a widely distributed editorial, Seaspan CEO Jonathan Whitworth reminded the nation that Davie lost an open and fair competition because it was insolvent. Whitworth also touted Seaspan's accomplishments, investing in the BC economy and making steady progress building for the Coast Guard and Royal Canadian Navy (Canada Newswire 2016). However, the RCN's Leadmark 2050 document noted "Operational research has consistently determined that the RCN requires a fleet of more than two dozen surface combatant warships supported by a minimum of three support ships as well as submarines." (2016, 42) According to RCN research, Canada's navy was operating underequipped. Six years passed since the shipbuilding strategy had been announced and Seaspan had made little progress advancing the supply ship project. Forced to build ships in sequence, Seaspan was still working on Coast Guard vessels when the RCN urgently needed supply ships (Den Tandt 2016).

By March 2017, the Liberal government awarded a \$230 million design and engineering contract to Seaspan. The shipyard would finally get the chance to complete the design, technical specifications, and cost estimates for the two joint support ships. Amazingly, it was estimated to take two years for this phase to be completed and only then would the government award a contract to actually build the support ships. Judy Foote, the minister of PSPC, acknowledged the \$2.6 billion figure—developed ten years prior—was "unrealistic" because it likely did not

include “overall maintenance costs, inflation, equipment costs, labour costs” (Seyd 2017). Foote also commented the final budget for the support ships would not be available until the design work was final. Delivery of the support ships was estimated to occur in 2021 and 2022⁴⁰ (Seyd 2017). However, in early 2018, the Liberal government released an update on the support ship aspect of the NSS, indicating construction would not begin until 2019, pushing the delivery date back another year (Pugliese 2018b). Although an “Early Block Build contract was awarded” to start construction of the ships in June 2018 (Department of National Defence 2018), that same month the government quietly announced a revised cost figure of \$3.4 billion, \$1.1 billion more than the original (Pugliese 2018f). Fortunately, for the RCN, the *MV Asterix* began training its thirty-six member civilian and 114 member military crew in autumn 2017, and set out for sea trials in mid-January 2018 (CTV 2017). Mark Norman’s predicament on the other hand, was only beginning.

A David Pugliese article from 12 January 2018 provided considerable detail on the Norman case. It included insight drawn from hundreds of pages of documents covering the RCMP’s investigation of Norman, unsealed in 2017 following a court challenge by media organizations. Prior to the article, it was well known that it had been over a year and the RCMP still had not filed charges against the officer. Perhaps less well known was the RCMP had not produced evidence substantiating the claim Norman leaked secret cabinet documents (Pugliese 2018b). Ultimately, the article demonstrated the indifference the Liberal government had for RCN operational requirements. Less than a month after the Liberals were elected in October 2015, cabinet ministers Harjit Sajjan, Bill Morneau, Judy Foote, and Scott Brison received a

⁴⁰ The Liberal’s Strong, Secure, Engaged defence policy—released in June 2017—reiterated the value two joint support ships will add to Canada’s maritime operations, but did not elaborate on delivery time or price (Department of National Defence 2017b, 35, 108).

letter from James D Irving of Irving Shipbuilding, requesting his company's own bid for an interim supply ship be properly evaluated. As the Shipbuilding Association of Canada indicated at the time, Davie won the project following an "exhaustive industry solicitation process." (Pugliese 2018a) Moreover, CEO of Inoceana, Alex Vicefield, noted the deal had been reviewed numerous times by independent agencies brought in by the federal government (Pugliese 2018a). None of this seemed to matter. Irving and Seaspan both wanted their own interim supply ship projects, and in particular, Treasury Board President, Scott Brison, seemed compelled to assist the Irving family. The Liberal government was embarrassed by Norman's alleged leak of secret cabinet information (Pugliese 2018a). Whomever responsible, the affair largely served as a distraction from the main issue of equipping the RCN with supply ships.

Results and conclusions

The process to replace Canada's AORs has led to some suboptimal results. The first true iteration of the project was cancelled when bids came in over budget. The funding envelope was declared insufficient by two expert federal organizations, as well as the DND, leading to reduced capabilities and possible cost-overruns in the future. The final delivery date has been revised several times. For instance, just last year, the initial operating capability was scheduled for spring 2018, which has come and gone (Perry 2017, 44). The suboptimal quality that continues to plague the project is not entirely understood through the bureaucratic politics model. The decision to build in Canada enjoyed wide support among policy players. Uniquely conditioned institutions interacted throughout the process, expressing differing opinions on where the support ships should have been constructed in Canada, as well as the appropriate cost of the project. When it came to the impractical goal of building in Canada—impractical given the boom and

bust nature of Canada's shipbuilding industry (Nossal 2016, 127)—competition for policy influence was relatively muted. Reflecting either a normative political value, or a cognitive shortcoming, there was near unanimous support for domestic construction, and this has resulted in schedule slippage. One could argue an optimal solution might have involved buying off the shelf from an experienced shipbuilding country such as the United States. However, a paper by retired RCN Commodore Eric Lerhe notes a 2014 RAND study commissioned by the Australian government found Australia “is paying a 30 to 40 percent ‘made at home premium’ for its warships against a US baseline” (Lerhe 2016, 13) Against this same baseline, Lehre notes “Canada is paying no more than a 10 percent premium for its ships” and that “arguments that foreign built equivalents of our replenishment and patrol ships are five to eight times cheaper must be considered doubtful in the extreme.” (Lehre 2016, 1, 20) It can also be argued a sovereign approach to shipbuilding is good for the long term security of the country because—especially in the instance of a major war—Canada would not have to rely on other nations for naval materiel. This argument however, is complicated by the tendency to use foreign technology in Canadian ship builds (Department of National Defence 2018).

There are three basic parts in the JSS Project timeline. The first and second deal with two different governments and their respective decisions to replace the AORs. The third concerns the actual process of replacement. Regarding the first and second parts, replacing the AORs with a JSS or a lesser iteration was not a forgone conclusion—especially during the Chrétien era. In spite of the aging AORs, and junior players like MP Gilles Duceppe, the Davie shipyard, and Peter Noble, pushing the government for shipbuilding contracts, the 1994 defence white paper was non-committal as far as replacement, and set an austere tone for the 1990s. Prime Minister Jean Chrétien (senior player) was intent on balancing the budget, and Minister of Defence Art

Eggleton (senior player) fell-in-line. The position was true to the policy goals of the Chrétien era Liberals. During the 1993 election campaign, the Liberals constructed a defence policy identity predicated on the assumption large military budgets were fiscally irresponsible, primarily due to the end of the Cold War and a recession. Chrétien did not really waver. It was not until Paul Martin (senior player) came to power that the Liberals seriously considered replacement of the AORs.

Prime Minister Martin cited the sixteen-day maritime standoff between the government and Third Ocean Marine as a primary factor motivating the AOR replacement. However, a host of senior and junior players were meanwhile advocating a replacement. Supporters included the House of Commons defence committee, the Royal United Services Institute of Nova Scotia, history professor Jack Granatstein, and Liberal member David Pratt, not to mention the various shipyards salivating at the thought of a large building contract. With the exception of TBS president Reg Alcock (senior player)—whom was in favour of lowering federal spending generally—there was scant vocal opposition to procuring an AOR replacement during the brief Martin era. Since the Treasury Board Secretariat (senior player) controls regular departmental spending, and at the time was operating under a balanced budget driven prime minister, it is easy to understand why Alcock opposed increases to the defence budget. Alcock did not oppose the AOR replacement specifically; he simply felt each department had a responsibility to reduce discretionary spending. And to a degree this does reveal political and bureaucratic disharmony. However, Alcock's position did not appear to delay Martin's decision to replace the AORs. Pratt was promoted to defence minister, and believed strongly in favour of replacement. With support from senior players like Rick Hillier and Liberal senator Colin Kenny, Pratt's position was heard by Martin. But these players do not deserve all of the credit. When Martin decided to replace the

AORs, an election was looming, and he recognized the military's state of decay had reached a critical point. Martin saw an important balance had to be struck, between the Chrétien-era's focus on a balanced budget, and the overambitious agenda of Mulroney's late-1980s Progressive Conservative government. The support ship was part of this replacement equation.

Observers of the Sea King replacement know-well that a decision to procure a piece of military equipment does not always transfer with the election of a new government (Plamondon 2010). Both Martin and Harper agreed the Canadian military required better funding to carry out its missions, but when Harper became the prime minister in early 2006, there was no guarantee the AORs would be replaced. Within a more or less regularized action channel, CDS Hillier emphasized the need for new replenishment vessels, but it is difficult to determine if this played a key role in the Conservative government's eventual decision to begin the acquisition of the JSS. It took time for the new Conservative government to embrace the Liberal's decision to procure a replacement supply ship. Aside from the August 2008 decision to reject JSS bids, over four years passed between the January 2006 election of a new Conservative government, and the June 2010 official announcement of the NSPS. Harper had the perceptive capability to rebrand it as a Conservative project.

Regarding the third part of this case, the drive to build the supply ships in Canada was paramount across the federal political spectrum, and the domestic shipyards. Build in Canada has been a common theme in Canadian defence procurement projects since the Ross Rifle scandal during the First World War (Plamondon 2008). Nossal argues:

the insistence of governments, both Liberal and Conservative" is "to see the principal purpose of defence procurement spending as the generation of economic benefits in Canada rather than the generation of military capability. Not only does this have a negative impact on capability, but it also makes equipment vastly more expensive than if the government just bought its military kit off the shelf... Canadianization dramatically increases the costs of procurement. (2016, 166)

Because building in Canada is a consistently popular approach among elected governments, it is difficult to blame one player or group of players in particular.⁴¹ Industry Canada (senior player) informed the Conservative government the \$2.6 billion earmarked for the project was barely sufficient to cover the cost of two supply ships, and when bids came in over this figure in 2008, the Conservatives cancelled the project, only to reopen it two years later with the same funding threshold. While the original funding problem is difficult to attribute to one entity, the decision to carry it over is a Conservative government error. However, the option of raising the funding level was not exactly an ideal solution either. A vague and unproven consensus suggests Canadians want their military properly equipped. Governments speak to this point regularly. Governments however, are especially aware of the potential political cost associated with ballooning procurement budgets, and tend to avoid them, even if it means burdening the military with fewer capabilities. In any case, as predicted, the cost of the JSS Project has increased substantially.

In one way, the NSPS/NSS had great potential. Conventional wisdom suggests problems with Canadian military procurement lie with the politicization of projects, whether it be a matter of regional benefits, the amount to be spent, or the purpose behind the weapon procured (Plamondon 2008). By holding an arms-length competition, ostensibly free from political interference, procurement stakeholders hoped to avoid the politicization generally seen as responsible for slowing progress and increasing costs. While the build in Canada approach was mostly popular, unfortunately, the NSPS/NSS failed to placate criticism from politicians regarding the two shipyard division of labour. The NSPS/NSS also did nothing to ensure timely

⁴¹ Building in Canada eases a government's anxiety towards purchasing because the majority of Canadians—especially in politics—believe it is the right thing to do. History shows that among political parties, Canadianization is perceived as a useful tool in getting elected and staying in power.

delivery of the support ships (for more on this see Perry 2015, 41). NDP member Peter Stoffer's (junior player) prediction shipyard provinces would engage in wasteful competition was correct. In the months preceding the announcement of the winning bids, BC, Québec, and Nova Scotia (junior players) poured millions of dollars into their local shipyards, hoping their investments would secure a contract. Québec's Davie had solvency issues, but when Seaspan and Irving were announced the winners, its complaints of unfairness were eventually followed up with an unsolicited bid to provide an interim supply ship. The fact the competition included a fairness monitor, and third party experts operating in conjunction with principally apolitical public servants, did not prevent players in Québec from crying foul. Perhaps NDP interim leader, Nycole Turmel (junior player), was correct when she insisted there was enough work for all of the major shipyards. However, by design, NSPS contracts were to be divided between the two leading shipyards. In this sense, Perry is correct when he argues the NSPS delayed the JSS Project (2015, 41).

Vancouver's Seaspan was simply too small to manage the contract it had been awarded. Three federal departments (senior players)—the PBO, the OAG, and the DND itself—reported the JSS was underfunded and in the hands of an underequipped shipyard. Seaspan of course denied the claim, and the Conservative government maintained the same budget. Ironically, the Conservative government—former champions of cleaning up Canadian procurement—publicized the NSPS as an example of fairness, openness, and transparency, only to later change the federal contracting regulations governing sole-source military purchases. Of course, senior players in the federal bureaucracy were concerned the interim deal would undermine the integrity of the NSPS/NSS. But the Conservatives saw two problems: a capability gap, and an upcoming election with a key seat in Davie's riding on the line. Davie's interim contract

however, did not translate into three happy shipyards. Rather, the rivalry and competition predicted by Stoffer became more severe, dirtier, even ruining a senior player's naval career.

Among all sides, political and otherwise, institutional interest was apparent. There certainly was competition among players to determine certain outcomes, but the main problem impeding advancement of the support ship project was the build in Canada approach which was forced to rely on a two shipyard division of labour and Seaspan being selected to construct the support ships. Seaspan's small size means its various NSS projects must be constructed in sequence instead of simultaneously. In certain cases like this, a decision that benefits Canadian industry can severely hurt the military, and Canada's national interest, not to mention taxpayer pocketbooks due to rising costs.

The pressure exerted on both the Liberal and Conservative governments to build in Canada, mainly flowing from junior industrial players, but largely supported by various political players across the system—and even senior players in the bureaucracy (eg Industry Canada)—ensured the project would be completed domestically. Although the bureaucratic-driven arms-length selection process was responsible for choosing one underequipped yard to take on so much of the work, the two-shipyard division of labour was ultimately a Conservative government decision. From this angle, it appears the bureaucratic politics model is insufficient in helping us understand why the JSS Project has so far been suboptimal. *Prima facie*, it seems Canada's shipbuilding industry underperforms when compared to companies like Fincantieri.⁴²

⁴² The French-Italian consortium proposed that Irving Shipbuilding build fifteen ships based on the consortium's proven FREMM frigate design, currently being operated by a host of navies including the French and Italian navies, at a guaranteed price of \$30 billion. This would essentially cut the cost of the Canadian Surface Combatant portion of the NSS in half (Pugliese 2018d).

And it is difficult to state unequivocally that dividing the labour among three shipyards would have ensured more optimal results. Primarily, Davie was insolvent. Given their financial problems, and the unanimously supported build in Canada approach, it appeared there was no better choice than Seaspan for the support ship portion of the NSS. (Strangely, the arm's length process was designed to avoid the kind of competition described by the bureaucratic model, which *a priori*, is seen to cause schedule slippage and cost-overruns.)

Davie's unsolicited interim project took advantage of a desperate situation. Predictably, Seaspan and Irving responded viciously, creating a situation that did nothing to ameliorate schedule slippage. Instead, remaining goodwill eroded, the competition among shipyards ended one man's naval career, and created a distraction from the main issue: equipping the navy with supply ships. With the one bright spot being the launch of the *MV Asterix* interim supply ship, the JSS Project continues to wade into the realm of delays—even as Early Block Construction began in June 2018—and cost-overruns amounting to \$1.1 billion more than originally budgeted.

The JSS Project has been suboptimal, and the combination of further delays and cost-overruns remains a possibility. The bureaucratic politics model is not entirely helpful in clarifying the reason behind the ongoing problems. Uniquely conditioned institutions and their individuals interacted, but the combination of the build in Canada option—widely supported—and the two shipyard division of labour, do not reflect the variation of competition predicted by the bureaucratic politics model. Ongoing problems are the result of a standard operating procedure, in this case, not directly linked to the organizing principle of the bureaucratic politics model, but to a longstanding byproduct of the cultural *zeitgeist* that guides Canadian federal military procurement. It precluded the use of an optimal solution, such as buying off-the-shelf from an experienced company residing in a country with a resilient shipbuilding heritage.

Although the Harper government ultimately selected this approach, it would have been politically challenging to go another way. The option was not only viewed as a way of improving local economies. Sovereign naval builds are arguably a means of increasing Canadian security; an important calculation on the part of the Conservative government to protect the national interest, and possibly an optimal long term outcome. With this in mind, it does not appear the Conservative government wished to indulge other options.

Either reflecting a standard operating procedure predicated on a cultural inclination to spread procurement dollars domestically, or a cognitive inability to understand Canada's shipbuilding inefficiencies—or possibly a combination of both—competition between the interacting players was muted when it came to the build in Canada approach. Relying on Seaspan has resulted in delays. In other words, Canadian made was impractical given the two shipyard division of labour that was forced to rely on one underequipped yard to tackle the support ship component. The cost-overrun aspect has been a long term problem given the inadequate budget carried from government to government. Perhaps the objective of the NSPS/NSS—to ensure Canada's shipyards have long-term predictable funding to avoid boom and bust cycles and become competitive—will take shape as these projects continue. The unfortunate side has been the extraneous cost imposed on the RCN, Canadian taxpayers, and of course, Vice-Admiral Mark Norman.

CHAPTER 7—REPLACING CANADA’S CF-18s

Before the Liberal party was elected in October 2015, it was difficult to imagine a scenario in which the replacement of Canada’s CF-18 Hornet fighter-jet interceptors could get worse than it already was. After announcing the government would purchase sixty-five of Lockheed Martin’s F-35 Joint Strike Fighters in 2010, Stephen Harper’s Conservatives were pursued by the opposition on the grounds they were sole sourcing an overpriced, untested, single-engine aircraft, completely unsuited for Canadian operations. Subsequent reports by the Parliamentary Budget Officer and the Office of the Auditor General confirmed the government had not disclosed the full life-cycle costs of purchasing the F-35, leading the Conservatives to freeze the funding envelope for the project. Lucrative domestic aerospace contracts ensured the government would continue investing in the F-35 international consortium, but without an open competition,⁴³ it was clear the Liberal party and NDP would not accept a Canadianized F-35. Some of the opposition’s criticism was valid, but the degree to which the CF-18 replacement project was high jacked for political gain reads like a story of fiction. Like the history of the Military Helicopter Project, this case requires its own book (see Plamondon 2010).

The Conservative’s mistake was in believing they could sole-source an expensive, relatively untested fighter-jet, without disclosing the full cost to the public. The Liberal’s handling of the project has been worse. Justin Trudeau oscillated from a campaign promise to

⁴³ Public Services and Procurement Canada does not appear to actually define fairness, openness and transparency, although these three words are frequently applied as some sort of institutional mantra. Their website states: “fairness, openness and transparency are assured through compliance with the Financial Administration Act, the Government Contracts Regulations and Canada’s international and national trade agreements, the World Trade Organization-Agreement on Government Procurement, the North American Free Trade Agreement, the Canada-Chile Free Trade Agreement, the Canada-Peru Free Trade Agreement, the Canada-Colombia Free Trade Agreement and the Agreement on Internal Trade. In addition, the government’s procurement activities are also governed by land claims agreements with Canada’s Aboriginal peoples. In addition to the legal provisions, the tenets of fairness, openness and transparency are further assured by Treasury Board policies, Public Services and Procurement Canada (PSPC) procurement policies and the internal procedures adopted by individual government departments and agencies.” (Public Services and Procurement Canada 2018).

hold an open competition excluding the F-35, to sole sourcing new Super Hornets from Boeing, to sole sourcing Australia's second-hand, vintage Hornets, as old as Canada's CF-18s.

For all of the posturing about the Conservative's attempt to sole-source the F-35, the Liberal government looks like the teapot that called the kettle black (CBC 2012). It appears the Liberal's plan to purchase Australia's Hornets is about two things. First, it is about avoiding a competition in which the F-35 might win, thus embarrassing the Liberal's lack of awareness on the F-35 file. Second, it is about avoiding the Liberal government's first interim purchase plan of eighteen Super Hornets—a project estimated to have cost almost as much as the purchase price of sixty-five Fifth Generation F-35s (Smith 2017). However, the current state of the Future Fighter Capability Project (FFC) is a shared responsibility. Both the Conservatives and the Liberals have made mistakes that must now be addressed directly. A military instrument as fundamental to Canadian sovereignty as a fighter-jet is too important to be neglected any longer. To their mutual credit, both Conservatives and Liberals seem to understand this.

The past: fighter jet interceptors were an effective contribution to North American defence

Why does Canada need new fighter-jets? Since the early years of the Cold War, Canada's fighter-jet interceptors have provided an essential component of an affordable⁴⁴ defence posture in the North American defence partnership. Charles Foulkes once wrote "air defence was to be a joint effort from the start" (1961, 2). This was true during the Second World War, and the need continued when the Soviet Union successfully reverse engineered a B-29 Superfortress in the

⁴⁴ Affordable here refers to the opportunity associated with amortizing fighter-jets across more than one mission platform. Canada was quite literally unable to afford the state-of-the-art radar systems envisioned by the US, in addition to its other military responsibilities, while equipping its air squadrons. Acquiring a small number of fighter-jets—relative the US—was a way of making a reasonable contribution to North American aerospace security as well as the RCAF's other operations abroad.

late-1940s (Fawcett 2010, 35). It was still the case when the threat posed by Russian bombers began to wane in the 1960s, and the US shifted its focus from air interception to missile warning systems. Even at the end of the Cold War, the US was not entirely satisfied threats to North American airspace had disappeared (Sokolsky 1995, 192). The Progressive Conservative's 1992 Defence Policy stated "the United States relies upon us to undertake a reasonable effort in our own defence." Should Canada fail to field a capable interceptor, it is not "unreasonable to expect demands from the United States with regard to its own northern security requirements", demands "that could well be incompatible with Canadian independence and sovereignty." (Department of National Defence 1992, 6) The degree to which the US has respected Canadian sovereignty is debatable. However, it is possible to imagine a less desirable scenario in which the US dominates Canadian airspace to protect its own domestic defence interests. In addition to Canada's modest coastal and radar defence contributions, the RCAF's consistent use of interceptors has largely appeased the US, affording Canada input in the continental defence partnership, and an acceptable degree of operational autonomy.

Canada's expansive landmass, geographical position, and small population have posed a longstanding challenge for its domestic security. *Defence against help-a strategy for small states?* is an article written by former professor of political studies at Queen's University, Nils Orvik. Published in 1973, Orvik's commentary on the challenge of maintaining territorial sovereignty came in the middle of the Cold War, when small countries like Finland and Canada faced the very real prospect of playing host to a large and more powerful military houseguest. To be clear, neither the Soviet Union—in Finland's case—nor the United States—in the case of Canada—were strictly interested in occupying territory for the sake of occupying territory. Rather, Finland and Canada were considered geostrategic liabilities should their militaries be

incapable of presenting a credible deterrent to attack. Orvik argues a small state like Canada, with crucial strategic significance to the US, had no other choice than to “invest in military capabilities... to assure” American leadership a US military presence was unnecessary (1973, 228). As noted by Philippe Lagassé, Orvik was prescribing a strategy for Canada, not describing what it was already doing. Quite the opposite, Finland successfully implemented a defence-against-help strategy. Due to its marginal strategic significance in the Cold War, Finland was able to provide a defence against help strategy with a very limited defence force (Lagasse 2010, 464-6). Canada’s size, location, and lack of human resources has created a tremendous security challenge. Fortunately, the US has been patient and amicable in its partnership with Canada.

In general, when Canadian governments face the grim prospect of violence, they make prudent defence decisions to protect the homeland and assist key allies. Mackenzie King’s limited liability war effort was impossible to sustain after France fell in June 1940, and the National Resources Mobilization Act was just the beginning of a more robust approach to Canada’s domestic and international defence stance. The Ogdensburg Agreement of 18 August 1940 established the Permanent Joint Board on Defence, ensuring a strong cooperative element towards continental defence (Bercuson 1995, 29). Addressing an imbalance in defence spending, the Hyde Park Agreement (20 April 1941) generated a military production system in which Ottawa and Washington would concentrate on “what it could build best”. This eventually led to the 9 April 1949 Joint Industrial Mobilization Planning Committee, which invigorated the Joint Statement Regarding Defence Cooperation’s call for “‘common design and standards in arms, equipment, organization, methods of training and new developments.’” (Wakelam 2011, 9-10)

Gleaned from these examples is Canada prioritized a cooperative continental defence

arrangement with the US. Although Canada could not always field the same level of cutting-edge aerospace technology, this mutual effort has been effective for both countries (Jockel 1987, 121).

During the Second World War, the US invested in several projects across Canada's northern frontier. The Alaskan Highway and a series of weather stations and air bases comprised the Crimson Highway. With the end of the war, the US continued to request access for overflight authorization, updates and new installations of meteorological stations, communications systems, new airfields, and a three-line radar system. In Ottawa, there were mounting concerns Canadian sovereignty was slipping away, and Canada's Ambassador in Washington, Lester B Pearson, made them known (Fawcett 2010, 34). In spite of Canadian concerns, and the short-lived post-war peace dividend, US military personnel were convinced of the growing Soviet threat to the continent. The 1947 advent of the Soviet's TU-4 long-range strategic bomber confirmed these fears. For the most part, the Canadian government did what it could to counter the Soviet air-threat. Initiated was a made in Canada air defence system, envisioned to be funded by Canada, and operated by Canadians. A major component of this system included jet-interceptors. In late 1948, 410 Squadron was established at St Hubert, Québec. A year later, 420 Squadron took up residence in Chatham, New Brunswick (Jockel 1987, 39). Canada exchanged its obsolete Supermarine Spitfires for eighty-five of Britain's newer deHavilland Vampire fighter-jets, soon after replacing many of those with fifty-six F-86 Sabres. Originally produced by North American Aviation in California, Canada's Sabres were built by Canadair in Montréal, mainly to serve its squadrons in Europe. Shortly thereafter, supporting a made in Canada approach to Canada's interceptor role, the minister of munitions and supply, CD Howe, ordered the CF-100 Canuck, designed and built by Toronto-based company AV Roe. By mid-1950, Brooke Claxton expanded

the Canadian air defence network to five operational squadrons, and later authorized the construction of nine radar sites to facilitate command and control (Fawcett 2010, 34-6).

Canada's system was rudimentary by American standards (Fawcett 2010, 39). In 1950, a collaboration between the USAF and the RCAF produced the Pine Tree Line: thirty-two new radar sites, thirty-one of which were located in Canada; designed to provide a one hour warning of an air attack; manned by Canadian personnel; and two-thirds of the cost covered by Washington. The RCAF however, did not have a sufficient number of personnel to operate the stations, ceding some of the responsibility to the USAF. In the mid-1950s, Defence scientists from the Defence Research Board and McGill University, designed the Mid-Canada Line. Otherwise known as the McGill Fence, and located at the fifty-fourth parallel, this early warning radar system would be highly automated, alleviating some of the pressure on RCAF operating shortages. Canada even paid for the line itself. A 1953 report by a group of Massachusetts Institute of Technology scientists concluded an all-out Soviet nuclear attack on North America would kill millions of people and devastate the US economy (Fawcett 2010, 36). This led to the recommendation for the construction of a more advanced warning system. Designed to provide a three to six hour warning, the Distant Early Warning Line (DEW) consisted of fifty-seven radar stations constructed at the seventieth parallel in Canada's Arctic. Already burdened with its operations in Korea, its NATO forces in Europe, and expansion of its air squadrons, Canada was forced to reach an agreement in 1955 in which the US would cover most of the costs of the DEW Line (Purver 1995, 86).

Although the interceptor option has provided Canada with a suitable split between delivering a reasonable contribution to continental security at a reasonable cost, the country's unforgotten dream of hosting a successful domestic aircraft industry was ultimately unaffordable.

AV Roe's CF-105 Arrow project was cancelled in 1959 because it was discordant with American strategic designs. Not only was the US placing greater emphasis on continental radar defenses, it could build more capable interceptors at home, for a fraction of the cost. AV Roe's production runs were too short to compete with larger, more experienced American counterparts (Story and Isinger 2007; Wakelam 2011, 145).

If Canada could not support its own aircraft industry, for a time, it at least tried to build its own licensed versions of American designed fighters. In 1958—the same year the bilateral North American Aerospace Defense Command was created—American aircraft company, Lockheed, introduced its first F-104 Starfighter to USAF squadrons. Under pressure by NATO to adopt a nuclear strike role, John Diefenbaker's government opted to purchase a Canadian built version of the Starfighter, the F-104G. Manufactured by Canadair near Montréal, and the J79 engine near Toronto, the CF-104 was first introduced to the RCAF in 1961 and flew for approximately twenty-five years (Stachiw and Tattersall 2007, 24-47). The McDonnell Aircraft Corporation in St Louis, Missouri, produced the F-101 Voodoo. The RCAF flew this plane from 1961 to the mid-1980s but it was never produced in Canada. Designed and built by Northrop Aircraft in California, the F-5 Freedom Fighter was a supersonic fighter-bomber, produced as a low-cost, low-maintenance alternative to large expensive fighters of the 1950s. Beginning in the late-1960s, Canada produced its own version of the F-5—the CF-116—through Canadair. Canadian company, Orenda Limited, built a more powerful engine, which helped pilots transition to the F-18 Hornet. Retired in the early-1990s, the CF-116 was the last fighter manufactured in Canada. The F/A-18 Hornet was a twin-engine supersonic fighter and attack aircraft produced in the US by the McDonnell Douglas Corporation from 1978 to 2000. Canada was the first foreign country to order the F/A-18, signing a contract for 138 in April 1980.

Receiving its shipment between 1982 and 1988, the CF-188B—more commonly known as the CF-18—eventually became Canada’s sole fighter aircraft, replacing the Starfighters, the Voodoos, and the Freedom Fighters (As of March 2018, information on these fighters can be found on the Canadian Aviation and Space Museum’s website).

Since the Second World War, North American defence has been a shared responsibility. The partnership that emerged from the PJBD has benefited both Canada and the US. The US came out of the war in much better shape than Britain and France, and assumed a leadership role in the international system. This of course came with a significant cost. Although it cannot in anyway whatsoever match the sophistication and volume of American military output, Canada has at least played the role of the helpful neighbor. Apart from hosting American radar systems, the fighter-jet interceptor has been Canada’s most effective contribution to North American aerospace security. Canada could not pay for and operate a radar system sufficient to match US concerns. And although Canada could not sustain a wholly domestic aircraft industry, its purchase of American interceptors, with subcontracts for Canadian aerospace firms, was something both countries supported. There are of course other reasons why fighter-jets serve Canada’s national interest. A longstanding commitment to NATO is certainly cardinal among them, hence dedication of the Starfighter and Freedom Fighter to the RCAF’s Cold War operations in Europe. But American concern with an Arctic defence gap never quite faded, even with the drawing back of the Iron Curtain (Sokolsky 1995, 182). For at least the near future, it is naïve to suggest the US would be comfortable with an outmoded RCAF. Canada has been buying up-to-date fighter-jets from the US since the late-1940s, lessening American security concerns and granting Canada a considerable degree of defensive autonomy.

The project: F-35s, Super Hornets, more Hornets, and maybe, possibly, F-35s?

The RCAF's fleet of CF-18 Hornets is nearly forty years old. Although the Hornets have been effective, the stress of high-speed aerial maneuvers shortens the life expectancy of fighter-jets, more so than bombers and other slower aircraft, making their replacement urgent (Huebert 2011, 228–9). As announced in the 1994 White Paper on Defence, Jean Chrétien's Liberal government began reducing Canada's fighter forces and support by twenty-five percent, retiring old fighters, cutting overhead, reducing the annual authorized flying rate, and cutting the number of operational aircraft. Yet, even an austere Liberal government's defence white paper made it apparent the CF-18s would need to be replaced in "the next century." (Department of National Defence 1994, 36) For a time, it appeared America's Joint Strike Fighter program would generate something to satisfy that need.

The Joint Strike Fighter (JSF) program was conceived in 1993 when the United States Navy, Air Force, and Marine Corps established the Joint Advanced Strike Technology program to explore the development of a new fighter-bomber that would be shared by all three services. In November 1996, Boeing and Lockheed Martin were selected to participate in the evaluation process to select the design for the JSF (MacMillan 2017a, 117). During the initial stages, the estimated development costs were US\$200 billion. To lessen the burden of these costs, the US encouraged allied countries to become partners in the program.⁴⁵ In 1997, Canada entered the JSF program with a US\$10 million commitment to phase one, the **Concept Demonstration**

⁴⁵ Courting allied countries to purchase and become financial partners in the JSF program was considered beneficial for several reasons. Program officials speculated foreign orders would push production to between 5,000 and 6,000 aircraft, helping rein in the cost per unit to somewhere between US\$37 million and US\$47 million. Even without a commitment to purchase the F-35, allied countries were encouraged to contribute financially to reduce development costs. The reward was a degree of influence in the design process, and opportunities for domestic companies to bid on contracts. Interoperability among North Atlantic Treaty Organization allies was another key selling point (Rossignol 2003, 1–2).

Phase. Unlike the United Kingdom, Canada did not announce plans to purchase whatever came out of the program. Instead, the CF-18s were modernized to carry out their operations for another decade, while the government was content with access to JSF technical data and subcontracts for Canadian companies (Rossignol 2003). Through a complex evaluation process that included strenuous flight tests and capability examinations, the US Department of Defense chose Lockheed Martin's F-35 design in October 2001. In December that year, Liberal Minister of National Defence, Art Eggleton, indicated to the Toronto Board of Trade he would recommend to cabinet Canada's participation in the next phase, estimating between \$350 million and \$450 million in contracts for Canadian companies. Over the life of the project, it was estimated that between \$8 billion and \$10 billion worth of contracts would generate 50,000 to 65,000 person-years of employment. Cabinet approval was granted, and a memorandum of understanding (MOU) was signed on 7 February 2002. In exchange for a contribution of US\$100 million, Canada became a level three partner in the **System Development and Demonstration Phase**. (In contrast, the UK contributed around \$1 billion to become a level one partner.) The Canadian government was also obligated to provide resources for any Canadian test and evaluation facilities, as well as personnel for the JSF Project Office. Canada was given the right to withdraw from the MOU if it was decided the level of Canadian industrial participation was not satisfactory (Rossignol 2003).

In 2005, the Chief of the Air Force Staff of the RCAF conducted an analysis of "potential aircraft to replace the CF-18s" (Office of the Auditor General 2012, 7; Williams 2012, 27). Using a preliminary definition of operational requirements, it assessed five candidate aircraft, four of which were already in existence. The fifth was the F-35, which was of course still in development. In June 2006, DND summarized this analysis in an Operational Requirements

Concept Document (ORCD) and concluded the F-35 “is not only the aircraft that best meets Canadian Forces’ requirements, with the longest life expectancy, but also is the most affordable” (Office of the Auditor General 2012, 17; Williams 2012, 77–8). Clearly, the RCAF had a preferred aircraft in mind, but the Conservative party was unwilling to promise the F-35 before conducting its own review. A month before the Conservatives won the 2006 election, Stephen Harper promised a \$5.3 billion defence plan that included the continued modernization of the CF-18s, a project implemented by the Liberals.⁴⁶ Conservative defence critic Gordon O’Connor acknowledged the announcement had Liberal government beginnings, largely completed, but he would not guarantee a Conservative government would continue to participate in the JSF program, despite very public concerns over a loss of subcontracts (Brewster 2006a).

By 2006, over fifty-four Canadian companies had benefited from JSF subcontracts valued over US\$157 million (Canada NewsWire 2006). This fact was not lost on the Conservative government. By mid-December 2006, Canada signed an MOU with the US to contribute US\$500 million over forty-five years to the JSF program’s third phase—the **Production Sustainment and Follow-on Development Phase**. Industry Canada hailed the government’s renewed signatory status as an opportunity to provide the domestic aerospace and defence sector with up to \$8 billion in subcontracts, while remaining privy to program definition and technology advancements. Participation also bought the government time to consider its future strategic and operational needs without an obligation to purchase the developmental F-35 (Mathieu 2006; Department of National Defence 2006). Although there were misgivings about technological

⁴⁶ The Liberal’s modernization of the CF-18s was designed to keep 92 Hornets flying until 2017. It was conducted in two phases. The first phase included an \$800 million improvement to the navigation and radio systems of the aircraft. The second phase awarded a \$117 million contract to Boeing to install a secure air-to-air communications suite (Brewster 2006a).

claims, including the effectiveness of F-35 stealth and possible obsolescence with the advent of unmanned aerial drones, Canadian defence journalist Murray Brewster noted the agreement indicated the government's intention to purchase up to eighty F-35 aircraft by 2017 (Brewster 2006b).

Released in May 2008, the Conservative's Canada First Defence Strategy stated that "Starting in 2017, 65 next-generation fighter aircraft" will "replace the existing fleet of CF-18s." (Department of National Defence 2008, 17) Speaking at a news conference in Nova Scotia, Prime Minister Stephen Harper noted the reason for sixty-five aircraft—as opposed to the figure of eighty originally circulated to the media—was based on the anticipation "they will have significantly greater capacity than existing fighters" (Province 2008). Although the document did not specify which aircraft would be procured, use of the term "next-generation" left few options, especially in light of the extremely lucrative subcontracts being awarded to Canadian aerospace companies.⁴⁷ Moreover, based on the RCAF's 2006 Operational Requirements Concept Document, Dan Ross, ADM (Materiel), recommended to cabinet the sole-source purchase of an American made stealth-like aircraft to replace Canada's CF-18s. His rationale was predicated on concern that a competition would go beyond 2017, exceeding the life span of the Hornets (Pugliese 2009a).

Industry Canada questioned the utility of a sole source contract on the basis an open competition would likely garner more profitable returns for Canadian aerospace companies. According to a David Pugliese article, Boeing—makers of the Super Hornet—teamed-up with

⁴⁷ As noted by *Ottawa Citizen* journalist Allison Lampert, by August 2008, more than seventy Canadian companies had won US\$212 million in contracts with the JSF program, with potentially billions of dollars to come (Lampert 2008). There were only a few aircraft available to Canada, and the F-35 was the only non-Chinese and non-Russian variant that fit the title of next-generation (Huebert 2011, 236).

officials at Industry Canada and openly criticized the proposed sole source arrangement. Mark Kronenberg, Boeing's vice-president for international sales, argued the F-35's developmental status made its price unpredictable, and made for unpredictable outcomes when compared to the Super Hornet's proven capabilities, which the US navy planned to utilize until 2035. Lockheed Martin vice-president Tom Burbage shot back. He argued modern air forces require a next-generation fighter capable of flying thirty years after 2016. As far as cost, Burbage retorted economies of scale via the consortium of program nations would drive the unit cost below the Super Hornet. Both companies claimed they were uniquely suited to filter lucrative subcontracts to the Canadian aerospace sector (Pugliese 2009b).

In May 2010, Dan Ross stated the government will either conduct an open competition, or acquire the JSF from the US through a direct government-to-government purchase. In conjunction with the ORCD, the Canada First Defence Strategy, and an *Ottawa Citizen* obtained RCAF planning document that stated air force personnel hoped to select a plane by 2011 and award a contract the following year, the primary assumption was the government would select the latter of the two options. Even without an official announcement to either procure or not procure the F-35, throughout early 2010, players in Ottawa, across the country, and around the world, registered their concerns. Former DND materiel boss Alan Williams made a simple and strangely novel plea for a policy document outlining the government's strategic priorities. 'Determine how the forces will be used and then decide on appropriate kit' (Pugliese 2010a). The *Saskatoon Star-Phoenix* published a letter-to-the-editor criticizing the Liberal's opposition to the deal as "disingenuous" on the basis the Chrétien government signed the first MOU between Canada, the US, and Lockheed Martin's JSF program (2010). Hitting back in an op-ed published in the same daily, Liberal member Ralph Goodale noted the partnership agreement

was “to ensure that Canada’s aerospace industry was not shut out of a decade of research and aeronautical advancement” which “did not preclude an open and transparent competition.” (Goodale 2010). Tony Ogilvy, the international sales representative for Saab Aerospace’s fighter aircraft, the Gripen, argued a sole source contract is a violation of taxpayer trust because it tends to waste money (Pugliese 2010a). Harnessing the once powerful words of Jean Chrétien, the Rideau Institute’s Steven Staples called the F-35 “flying Cadillacs.” (Canadian Press 2010)

In spite of mounting opposition to the sole source option, on 16 July 2010, Defence Minister Peter MacKay announced that as a key component of the Canada First Defence Strategy, the Conservative government would acquire sixty-five F-35 Lightning IIs to replace its fleet of fourth-generation Hornets. MacKay boasted the F-35 was the best fighter, at the best price (Brewster 2010). The cited cost was \$9 billion for the initial purchase, and \$16 billion when the follow-on maintenance contracts were factored in (Blanchfield 2010). To ensure a smooth transition, first deliveries were to be made in 2016, one year before CF-18 obsolescence (Department of National Defence 2010a). During a 15 September 2010 House of Commons committee meeting, MacKay, Industry Canada Minister Tony Clement, and Public Works Minister Rona Ambrose, claimed the competitive process for the JSF happened in 2001, when the US government selected Lockheed Martin’s F-35 over a competing aircraft from Boeing. Cynicisms finally vindicated, opposition members of parliament argued the US competition was for an aircraft that met the needs of the US military.⁴⁸ Furthermore, as a sovereign nation, the Conservative government had a responsibility to select an aircraft based on an independent

⁴⁸ An August 2010 article by David Pugliese noted an unknown member of the RCAF used a Winnipeg air force headquarters computer to alter a *Wikipedia* article on the JSF. Pugliese commented the *Ottawa Citizen* notified DND the document had been changed, including the deletion of negative information on the F-35 and the addition of insults about Michael Ignatieff’s opposition to Canada’s purchase, sparking an internal investigation (Pugliese 2010c). The article did not suggest any conspiracy between RCAF members and the Conservative government. It simply indicated certain RCAF members seemed to prefer a Canadianized F-35.

assessment of Canadian military needs. Questioning the necessity of the purchase during a \$50 billion deficit, Liberal leader Michael Ignatieff promised to review the deal if made prime minister.⁴⁹ At the time, Canada was not obligated to sign a purchase contract until 2013, allowing any future government to back out (Pugliese 2010b; Cohen 2011).

In October 2010, Dan Ross appeared before the Standing Committee on National Defence to defend the government's decision (Department of National Defence 2010b). In a futile attempt to dissuade concerns over process, product capability, and rising costs,⁵⁰ Ross made a concerted stand in favor of the F-35. He outlined a variety of benefits Canada would receive by procuring the Lightning II, and argued that any defence aerospace technology acquired by Canada would have to last thirty to forty years. Keeping the CF-18s for the length of time required to restart a procurement process, acquire a replacement and operationalize it, would hitherto imperil Canadian military personnel. The F-35's stealth technology would not only allow it to approach foreign aircraft undetected, it would also close an interoperability gap between the RCAF and the USAF (Huebert 2011). Because the JSF project is unique to the US, the F-35 was argued by Ross to be the "only operationally viable . . . solution" (Department of National Defence 2010b). He also stated that should Canada decide to withdraw from the MOU and hold a new competitive process, "we would lose key benefits; we would be subject to penalties, the industrial guarantees we already have would be negated, and Canada's industrial plans with our partners would be suspended" (Department of National Defence 2010b). One

⁴⁹ With the advent of the May 2011 election, Michael Ignatieff did not become prime minister, even losing his Etobicoke-Lakeshore seat as the Liberals fell to third place nationally. With the Liberals winning a meagre thirty-four seats, the NDP took the role of official opposition to a rejuvenated Conservative majority (Toronto Star 2011).

⁵⁰ For more on F-35 matters of process, product capability, and rising costs as a topic of political conversation, see Plamondon (2011).

question that surfaced was why Ross, a public servant, was so vociferous and enthusiastic about the purchase (MacMillan 2017b, 151).

In 2011, an election year, criticism of the F-35 project continued from opposition members of parliament. There was even concern over the use of public funds to promote the Conservative's purchase of the F-35. Figures obtained by the Liberals showed public servants at DND requested around 600 hours of overtime for their role in organizing press conferences and other events to endorse the purchase of the JSF. High-ranking military personnel took part in cross-country talks extolling the benefits of the F-35, which Liberal industry critic Marc Garneau claimed was unprecedented. The *Ottawa Citizen* reported DND sources indicated some officers were uncomfortable with their role in the public relations campaign, but relented after being "pressured by the Privy Council Office and the Prime Minister's Office to spearhead the sales effort." (Pugliese 2011) Unprecedented or not, as it turned out, the main point of criticism was over the cost of the F-35.

Earlier in the year, US Defense Secretary Robert Gates placed the F-35B—the Short Takeoff and Vertical Landing version slated for the US Marine Corps—on a two-year "probation" over "significant testing problems" (Stone 2011). Although this version was different from the one Canada intended to purchase, mounting technical problems generated further questions at home (The Fifth Estate 2012). In March 2011, Kevin Page, Canada's Parliamentary Budget Officer, criticized the government's assertion the cost of acquiring the F-35 would be \$16 billion over twenty years. Although Page's cost-to-weight-ratio methodology was criticized by the government as inaccurate, his estimate of US\$29.3 billion over thirty years validated the concerns of others that Canadians were not getting an honest explanation of the most expensive military procurement project in their history (Office of the Parliamentary Budget

Officer 2011, 10). In regards to whether the F-35 was the only viable platform, DND's statement of operational requirements had not been released to the public (Byers and Webb 2011, 218), making assertions in its favor a leap of faith (Plamondon 2011, 272–3). However, clearly, one of the major problems was determining the true cost.

Although heavily contested, the decision to purchase the F-35 did not prevent the Conservative party from winning a third consecutive mandate and a majority, which relegated the Liberals to third place for the first time in the party's long history (Corbella 2011). The Harper government had not signed a definitive purchase agreement, and did not plan to do so until 2012 or 2013, but the electoral win gave the impression an F-35 deal was likely to be finalized in the near future (Shalom 2011). Even as staff from the federal auditor general's office travelled to the Lockheed Martin plant in Texas in September 2011, there was skepticism the government would change course on its decision (Berthiaume 2011). Yet, momentum began to slow.

In March 2012, the Office of the Auditor General released a report that examined whether DND, Industry Canada, and PWGSC had applied due diligence in managing Canada's participation in the JSF "Program", and in managing the federal decision-making process to replace the CF-18s. The report noted that while DND exercised due diligence in managing Canada's industrial participation, in communicating risks and in assessing options before signing the 2006 MOU, DND "did not fully inform decision makers of the implications of participation in the JSF Program for the acquisition process" (Office of the Auditor General 2012, 19). The report also stated that DND did not exercise due diligence in managing the process to replace the CF-18s. Namely, DND did not provide PWGSC with a clear explanation of the procurement implications of the 2006 MOU. Further problems included DND's failure to effectively

communicate to decision makers both the risks and problems of the F-35 product development, as well as the full life-cycle costs which were “understated” and “not fully provided to parliamentarians” before the 2010 decision to purchase. DND’s own twenty-year life-cycle estimate placed the F-35 somewhere between \$16 billion and \$25 billion. The OAG also criticized DND for failing to provide documented analysis showing how these numbers were generated (Office of the Auditor General 2012, 27-31).

In relation to the process, the report noted that while Industry Canada was diligent in managing Canadian industrial participation, DND failed to communicate to PWGSC and the government that in order to maintain ongoing industrial benefits, Canada would have to purchase the F-35. Although briefing materials given to ministers at DND, Industry Canada, and the Treasury Board Secretariat stated the 2006 MOU did not commit Canada to purchase the F-35, they did not state that “retaining industrial benefits depended on buying the F-35 as a partner in the JSF Program” (Office of the Auditor General 2012, 19). While Ross testified that withdrawing from the MOU would negate Canada’s “industrial guarantees,” the OAG argued that neither he nor anyone else made apparent that failure to purchase the aircraft would generate the same outcome (Department of National Defence 2010b).

In the context of criticism from opposition parliamentarians and the budget officer, but especially from the auditor general’s report, the government announced it accepted the OAG’s recommendations and that it would take “seven steps to fulfill and exceed” them (Department of National Defence 2012a). Prominent among the seven steps was the freezing of the funding envelope allocated for the F-35, as well as the commissioning of “an independent review of DND’s acquisition and sustainment project assumptions and potential costs for the F-35” (Department of National Defence 2012a, see also Department of National Defence 2012b). The

independent review—completed by KPMG⁵¹—confirmed the full life-cycle cost would be \$45 billion over forty-two years, a far cry from the estimate cited by the Conservative government in 2010 (Department of National Defence 2012b, 27). The Canada First Defence Strategy budgeted \$9 billion to purchase sixty-five next-generation aircraft and this total was carried into documents supporting the government’s 2010 announcement that it would purchase the F-35. Even after Peter MacKay and Rona Ambrose announced in December 2012 they had “hit the reset button” and were “taking the time to do a complete assessment of all available options”, opposition parliamentarians did not relent, continuing to accuse the government of misleading the public (Canadian Broadcasting Corporation 2012b). MacKay was even labeled as incompetent for supporting the F-35, and for failing to take responsibility for the mismanagement of the file (Murphy 2012).

Things continued to get worse for the Conservative government and its JSF Project. An all-party House of Commons public accounts committee—dominated by the Conservatives—produced a November 2012 draft report that was leaked—against parliamentary rules—to the *Canadian Press*. The leaked draft included scathing criticism by budget officer Kevin Page and auditor general Michael Ferguson that had been removed from the final report. The comparison of the two drafts publicly confirmed the Conservatives had unfairly blamed public servants at defence for understating the true cost of the F-35, when in fact the price was well known by Harper and his cabinet. Opposition members, such as the deputy chairman of the committee, Liberal MP Gerry Byrne, argued the final report did not reflect what members actually heard, and claimed the Conservatives had sanitized the report to save face (Brewster 2013a).

⁵¹ According to its Canadian website, “KPMG is a Canadian leader in delivering Audit, Tax, and Advisory services. KPMG responds to clients’ complex business challenges across the country and around the world.” (KPMG 2018)

Even though Canada was still a partner in the Production, Sustainment, and Follow-on Development phase of the JSF program—including contributions totaling \$332 million by 2013, and eight Canadian military officers working with multinational partners in the US—F-35 partner countries grew concerned Canada would leave the consortium.⁵² To ease concerns, Canadian diplomats and military officers were instructed to “downplay” the OAG report, and refer to the criticism as a “bureaucratic” issue rather than anything substantive (Brewster 2013b; Berthiaume 2013). The problem at home was far more than bureaucratic. By justifying a sole source purchase with unrealistic cost estimates, the Conservatives had delegitimized their CF-18 replacement attempt. Grasping to provide some objective, third party analysis, a four-person panel was tasked with examining the cost, long-term maintenance, and risks of several fighter-jet interceptors, including the Boeing Super Hornet, the Eurofighter Typhoon, the Dassault Rafale, and Lockheed Martin’s F-35. (Although the panel’s results were not made public, they held a press conference on 12 June 2014.) Comprised of Keith Coulter, former head of the Communications Security Establishment, former senior government official James Mitchell, University of Ottawa professor Philippe Lagassé, and former federal comptroller-general Rod Monette, the panel did not recommend which jet to purchase. Instead, they performed “the necessary rigorous analytic work” to enable deputy ministers to better advise the government on a suitable CF-18 replacement. Opposition members claimed the process was “rigged to favour the F-35”, and called for an open competition. Alan Williams dismissed the panel as a public relations “ploy”, arguing an open competition was the only way to proceed (Pugliese 2014).

⁵² Besides Canada, consortium countries in 2013 included Britain, Italy, the Netherlands, Australia, Norway, Denmark, Turkey, and of course, the US. Concern stemmed from the fact that a change in the number of purchased aircraft by one member country had the potential to raise the cost for the remaining orders (Berthiaume 2013).

Fast-forward to the 2015 federal election campaign. Standing in front of a crowd of about 800 at Pier 21 in Halifax, Liberal Party leader Justin Trudeau promised that if elected his government would cancel the Conservative's public commitment to purchase the F-35. Citing soaring costs, technological problems, and an RCN in desperate need of naval vessels, Trudeau claimed the F-35 would be a "nightmare to Canadian taxpayers".

It no longer makes sense, if it ever did, to have a stealth, first-strike capacity fifth-generation fighter... There are many other fighters at much lower price points that we can use that have been proven, that we will actually be able to deliver in a timely way to replace our CF-18s and make sure our military has the planes it needs and also the ships we need to continue to be the country we expect us to be. (Harris 2015)

Trudeau was adamant. Reportedly, he boasted a Liberal government would conduct an open competition that excluded the F-35 as a possible replacement to the rapidly aging CF-18s (Harris 2015; Globe and Mail 2015). Remarking the Liberals were "living in a dream world", Stephen Harper reminded Canadians the government had been participating in America's Joint Strike Fighter program since the Chrétien era, with hundreds of millions invested, and billions on the line as far as potential domestic aerospace contracts. As of summer 2014, thirty-three domestic companies had garnered contracts amounting to US\$637 million. Harper was quick to point out Canadian shipbuilders were already "up to their eyeballs in work" and dumping the F-35 to focus on shipbuilding added nothing new to Canada's shipbuilding industry. Moreover, Harper characterized Trudeau's plan as tantamount to "cratering our aerospace industry" amounting to "bad policy" and showing a total "disconnect and profound lack of understanding of the Canadian economy." (Harris 2015) Nevertheless, in October 2015, Canadians granted Trudeau a majority government. Discarding the F-35 option seemed imminent.

A month after the election, the new Liberal government released mandate letters for its ministers. The Minister of Defence and the Minister of PWGSC—renamed Public Services and Procurement Canada (PSPC)—were tasked with launching “an open and transparent competition to replace the CF-18 fighter aircraft, focusing on options that match Canada’s defence needs.” (Pugliese 2015) PSPC created a new office to oversee the renamed Future Fighter Capability Project, with senior public servant Paula Folkes-Dallaire at its head. The procurement branch at DND was expected to work with the RCAF in withdrawing from the F-35 program (Pugliese 2015). Only a few months later, in February 2016, Minister of Defence Harjit Sajjan told an audience of experts and industry representatives the Liberal government would not exclude Lockheed Martin’s F-35s from a future competition. According to Alan Williams, exclusion of the F-35 was never a valid option in the first place. As discussed in his 2006 and 2012 books on Canadian defence procurement and the F-35 program respectively, the Agreement on Internal Trade requires goods above \$25,000, and services above \$100,000, to be acquired through an open and fair competition. With only one exception—article 1804—during a crisis, or in cases where only one supplier can meet the statement of requirements, goods and services can be procured without an open competition (Williams 2006, 7-8). In 2016, Williams remarked “Prejudging the outcome of the competition by explicitly excluding the F-35 would violate this agreement.” (Chronicle-Herald 2016).

Citing an “urgent” need to replace the CF-18s, in June 2016, there was speculation the government would not necessarily start an open competition (Leblanc 2016). Just one month later, the Liberals scrapped the statement of operational requirements used by the previous

Conservative government, arguing it left only the F-35 as a likely contender.⁵³ Even before a new statement of operational requirements⁵⁴ had been written, critics accused the Liberal government of skewing it to preclude the F-35 (Leblanc 2016). Concerned with Canada's "capability gap" in meeting its NORAD and NATO commitments, in late-November, Ministers Harjit Sajjan, Judy Foote, and Navdeep Bains announced their government would purchase eighteen Boeing Super Hornets to be used on an interim basis (Brewster 2016). They neglected to state it was a sole source purchase. Journalist John Ivison wrote "They appeared to be secretly ashamed at the trumpery of it all, as well they should have been." (Ivison 2016) A few days later, RCAF Lieutenant-General Mike Hood reported all seventy-seven of Canada's CF-18s would be able to fly until 2025, calling into question the Liberal's justification for the interim purchase (Berthiaume 2016a). During that same period, a Defence Research and Development Canada report by DND's research bureau—that criticized the interim jet option as prohibitively expensive—was deleted from DND's website. The report also contradicted the Liberal's assertion Canada has a "hard minimum requirement for the NATO commitment." While DND claimed the report had classified information, critics argued the Liberals had it deleted because it threatened their plan to purchase interim Super Hornets (Berthiaume 2016b).

⁵³ Through an access to information request, I obtained a copy of the Next Generation Fighter Capability Statement of Operational Requirement. Concern for the conduct of international affairs and the defence of Canada meant that DND officials redacted most of the relevant operational information. There are only a couple of vague hints the F-35 was considered the most desirable platform for RCAF operations. Mandatory capabilities such as technology to "minimize the risk of detection" and an ability to "continuously upgrade the required level of interoperability" are only tangentially connected to the F-35 (Department of National Defence 2012, 3). Boeing would certainly argue its Super Hornet is capable of meeting those requirements. In any case, redacted information makes it difficult to state unequivocally the Conservative government wired the SOR to favour Lockheed Martin's JSF F-35 Lightning II.

⁵⁴ Williams' *Reinventing Canadian Defence Procurement* gives a quick definition of a Statement of Requirements. As stated, the SOR is prepared by the head of the sponsoring military organization to meet operational needs. Williams argues "the ideal SOR encourages competition by framing the requirements in performance terms, that is, specifies what the equipment should be able to do rather than how exactly it has to do it" (2006, 39).

Also in November 2016, Conservative defence critic, James Bezan, revealed that the Liberal government introduced an unprecedented non-disclosure agreement preventing 235 military personnel and federal public servants from discussing the jet replacement. The agreement placed the project on the same level as top-secret counter-terrorism missions undertaken by the Joint Task Force 2, as well as clandestine spy operations. Although DND claimed similar agreements have been used with procurement staff before, Alan Williams disagreed (Pugliese 2018c).

On 8 December 2016, like déjà vu, the new Parliamentary Budget Officer Jean-Denis Frechette, sent a letter to DND's deputy minister, John Forster, asking for the cost estimates, data, and analysis associated with buying and operating eighteen Super Hornets. Not only were opposition members accusing the Liberals of using the interim purchase to avoid the F-35 option, there was reason to believe it would be more expensive to operate both Super Hornets and the CF-18 Hornets concurrently (Berthiaume 2016c).

By 31 January 2017, Forster responded in a letter to Frechette's request, stating the government had not yet made a decision to purchase interim Super Hornets, and that because "discussions" were in the "early stages, the cost data and analysis to estimate the total lifecycle cost of the potential acquisition of 18 Super Hornet aircraft" was not available. Furthermore, preliminary cost data obtained from Boeing and the US government was incomplete and could not be shared because it was marked as proprietary and commercially sensitive information. By May, it was estimated the Super Hornet interim deal would cost somewhere between \$5 billion and \$7 billion (Smith 2017). It did not really matter. That same month, Boeing convinced the US Commerce Department and International Trade Commission to investigate Montréal-based Bombardier for "dumping" commercial airplanes into the American market. Boeing cited heavy

Canadian government subsidies as reason why the US should impose tariffs on the sale of Bombardier commercial jets. Boeing spokesperson, Dan Curran, acknowledged his company's "deep relationship" with Canada, iterating "our case is focused on the Bombardier company, not the country at large." (Smith 2017) The Prime Minister's swift and decisive response did not appear to take that into consideration. Less than two weeks later, in a very public setting at the CANSEC arms fair in Ottawa, Steven MacKinnon, parliamentary secretary to PSPC Minister Judy Foote, announced Canada had halted talks to purchase the eighteen Super Hornets (Chase and Van Praet 2017).

On 7 June 2017, the Liberal government released *Strong, Secure, Engaged: Canada's Defence Policy*. Although the document specified Canada would purchase "a fighter capability of 88 jets to replace the aging CF-18 fleet", it also noted "the Government of Canada is continuing to explore the potential acquisition of an interim aircraft to supplement the CF-18 fighter aircraft fleet until the completion of the transition to the permanent replacement aircraft." (Department of National Defence 2017, 38) As Trudeau continued to take a hardline against Boeing—stating "We won't do business with a company that is busy trying to sue us and put our aerospace workers out of business"—critics claimed there never was a "capability gap" in the first place (Smith 2017). However, it was clear the government was intent on pursuing these two projects concomitantly.

In December 2017, the new PSPC Minister, Carla Qualtrough, stood with Defence Minister Sajjan, Transport Minister Marc Garneau, Economic Development Minister Navdeep Bains, and Chief of the Defence Staff, General Jonathan Vance, to announce Canada would replace the RCAF's current fleet of CF-18s with eighty-eight new fighter jet interceptors. The deal was estimated to cost somewhere between \$15 billion and \$19 billion. The ministers also

confirmed the decision to pass on Boeing's Super Hornets to fill the interim role, opting to close the apparent capability gap with eighteen second-hand F-18 Hornets from Australia.⁵⁵ In a subsequent question period in the House of Commons, Conservative leader Andrew Scheer roasted the Liberal government for choosing to purchase second-hand aircraft nearly as old as Canada's Hornets. "If the prime minister is so keen on buying fixer-uppers, will he come over? I have an old minivan I would love to show him." (Berthiaume 2017)

However, the whole matter was quite serious. In a somewhat baffling twist given the already onerous complexity of Canadian defence procurement, the Liberal government added an economic impact clause to future acquisitions from exogenous companies. Callously dubbed by some as the "Boeing clause", Minister Qualtrough explained the clause would involve an "economic impact test" applied to all bidders in major competitions. Minister Bains insisted the clause complies with Canadian and international law. Bains also insisted the government's new position was clear: "If there is economic harm to Canada, if there's an impact on Canadian jobs, if there's an impact to some of the key sectors in the Canadian economy, you will be at a distinct disadvantage" when it comes to selling materiel to the government (Leblanc 2017). Regarding the FFC Project, Boeing spokesperson Scott Day replied his company was awaiting details on the "Boeing Clause" before deciding how to proceed in the forthcoming competition. A formal request for proposals was scheduled to be unveiled in spring 2019, with the winner announced in 2022 (Leblanc 2017).

⁵⁵ Dr Peter Layton, a visiting fellow at Griffith University in Australia, noted the Australian Hornets can meet Canada's defence needs, but will require maintenance for structural wear and fatigue. He also added whatever low cost the Australian government will attach to the Hornets might be eclipsed by their "second-string" rating and need for close monitoring (Dingwall 2017).

Slightly over one month later, on 22 January 2018, Boeing chose not to attend a Government of Canada industry day in which key aerospace companies were invited to learn details about the FFC Project, including information about the schedule, high-level operational objectives for the interceptors, and expectations for economic benefits (Canada NewsWire 2018; Berthiaume 2018a). Scott Day simply reiterated his company remained undecided as to whether it would participate, opting to evaluate the matter after “Canada outlines the (fighter jet) procurement approach, requirements and evaluation criteria.” (Berthiaume 2018a) That same month, the US International Trade Commission (ITC) voted unanimously to allow Bombardier to continue selling its C-Series commercial jets without the 300 percent duties previously imposed by the US Department of Commerce. The ITC ruling claimed Boeing did not suffer harm from prospective imports of Bombardier’s C-Series jets (Canadian Press 2018). By late-February, the Liberal government placed Boeing on the official list of companies approved by the government to participate in the FFC Project competition. Other companies included Lockheed Martin, Dassault, Saab, and Airbus. Perhaps sore about the ruling, Boeing remained undecided as to whether it would submit a bid (Berthiaume 2018c).

In February 2018, DND’s Assistant Deputy Minister (Materiel), Pat Finn, received a letter of cost proposal for the sale of Australian Hornets. Since Australia’s Hornets were built in the US, Finn explained the Australian government contacted the US State Department for the transfer under the International Traffic in Arms Regulations to gain proper regulatory approval of the sale. Finn also mentioned DND wants the deal arranged by autumn 2018, with deliveries beginning summer 2019. The Liberals originally planned for first arrivals to happen in January 2019 (Pugliese 2018b). With so many balls in the air, auditor general Michael Ferguson launched a new investigation into the replacement **programs**. In January 2018, journalist Lee Berthiaume

reported Ferguson's office had been examining internal government records for several months, although Ferguson would not disclose which aspects were being investigated. A report was scheduled to be published in autumn 2018 (Berthiaume 2018b). Berthiaume followed-up in July 2018, stating Hood's testimony revealed in September 2016 the Liberals changed a longstanding RCAF requirement policy. The RCAF would henceforth be required to "start meeting its obligations to North American defence and NATO at the same time, which had created a shortage of planes." (Berthiaume 2018c)

As of March 2018, DND's website stated the Future Fighter Capability Project would award a contract for eighty-eight new fighter-jet interceptors by 2021/2022, with first deliveries to be made in 2025, and full operational capability achieved by 2031. An article by David Pugliese cited a December 2014 DND report that estimated a \$1.5 billion cost attached to extending the CF-18 lifespan by fourteen years. The \$1.5 billion figure is in addition to the \$500 million the Liberal government allocated for purchase of the eighteen used Australian F-18s (Pugliese 2018b).

Results and Conclusions

The process to replace Canada's aging fighter-jets interceptors has produced a suboptimal result. Whereas the first attempt was stopped by reports from influential senior bureaucratic players, the second attempt remains ongoing amid challenging circumstances as far as ensuring a timely and affordably costed delivery. The process has involved a host of senior players, mainly consisting of the prime minister, cabinet ministers, and bureaucratic institutions. Junior players included opposition members of parliament, corporate personnel, and the press. There was certainly strong competition for policy influence, but actual affect flowed mainly from senior players in

government and the bureaucracy. The first attempt to replace the CF-18s produced suboptimal results chiefly because the F-35 was controversial among players, leading to fierce competitive interaction. Reports by the PBO and the OAG delivered a decisive knockout blow. As independent agencies, reports on government business are the primary function of these two bureaucratic institutions. Regarding the second attempt to replace the CF-18s, the Liberal government has so far avoided the pitfalls of institutionalized, bureaucratic criticism, though an OAG report is forthcoming. (As things stand, it does not appear the current Liberal government is on-track to deliver a fighter-jet interceptor more capable than the F-35, at a better price, and in a timely manner.) In the attempt to sole-source the F-35, the hierarchical position of the prime minister had the potential to play a role, but it was impeded by growing resistance from opposition political parties, bolstered by the PBO and the OAG. The bureaucratic politics model is helpful in providing a degree of structure to analyze competition for policy influence in the CF-18 replacement saga. It has especially helped demonstrate the role a senior bureaucratic institution can play in disarming an elected government.

With the 2008 release of the Canada First Defence Strategy, it was clear the Conservative government prioritized the F-35. Although the document did not specifically name Lockheed Martin's JSF F-35 Lightning II, the wording "next-generation fighter aircraft" left no other option. Dollars from lucrative subcontracts were flowing into the coffers of Canadian-based companies, and the RCAF clarified the desirability of the F-35 in their 2006 Operational Requirement Concept Document. Interestingly, the number of aircraft was adjusted from eighty to sixty-five. Price always appears to be a contentious issue with large defence acquisitions in Canada. The Conservative government cited "greater capacity" as reason why the order number was reduced. In all likelihood, the estimated cost of the F-35 in 2008 was high enough to

convince the Conservatives they had to reduce the order number to make the overall cost palatable to the opposition. It didn't work.

Had the F-35 been the winner of an open competition, the opposition might have taken a more accommodating position towards it. And had he been operating inside a vacuum, Dan Ross's (senior player) recommendation to sole-source the F-35 purchase might have been reasonable. After all, the CF-18 lifespan was projected to end around 2017, and Ross knew a competition carried the potential to extend well beyond that date. As a developmental aircraft, the F-35 received a lot of damaging press, in the US and Canada, and this certainly contributed to questions of performance and cost. Competition between the Conservatives and other players mainly addressed the decision to forgo competition. Under the assumption an open competition would garner more lucrative domestic defence contracts, Industry Canada (senior player) was joined by Boeing (junior player) in their criticism of the government's sole source option. Saab (junior player) contributed to the criticism, arguing sole source contracts violate taxpayer trust because they waste money. The dissent exhibited by a bureaucratic department towards an elected government is not abnormal. Dissent—or competition—is built into the bureaucratic politics model. However, by 2010, the Conservatives seemed to gain control over Industry Canada's messaging, where Minister Clement joined Ambrose and MacKay to argue an open competition had taken place in 2001, in which Lockheed Martin defeated Boeing in the contest to build the JSF. Michael Ignatieff (junior player)—leader of the official opposition until the May 2011 election—led the chorus against the sole source purchase.

In spite of violation of the AIT, the use of public servants to promote a politicized acquisition, and heavy political opposition, what finally ended the Conservative government's attempt to sole source the F-35 were reports by the Parliamentary Budget Officer and the Office

of the Auditor General (senior players). Although the methodology was questionable, the costing assessment developed by PBO Kevin Page cast irreparable doubt over the credibility of the Conservative government. The Conservative driven hyperbole about the F-35 being the best fighter at the best price was quashed when Page's report doubled the predicted cost. The PBO report did not prevent the Conservatives from winning the 2011 election. (Elections are rarely decided by a single issue.) However, a year later, the OAG released its own incriminating report. The way in which the document was worded left DND holding the bag. DND bureaucrats were blamed for a number of things, most importantly, they were held responsible for failing to inform decision makers of the F-35's full life-cycle costs. Everyone in Ottawa could read between the lines: the F-35 sole source was a Conservative government misstep. To try and save face, the Conservatives ceded territory. They froze the funding envelope for the JSF Project, and appointed KPMG to conduct an independent review of the F-35 acquisition proposal. The report only confirmed what the PBO, OAG, and nearly every opposition member of the House of Commons was already saying. At \$45 billion over forty-two years—\$29 billion more than the Conservatives originally estimated—the F-35 had to be competed against other variants. In spite of changing course on the F-35, the Conservatives lost the next election. The lesson to future governments: follow Canada's AIT when procuring. This case demonstrates that even a senior player such as the prime minister should not override a standard operating procedure, like competition, no matter how unfortunate the alternative might be.

Perhaps the most interesting point to be made is as follows. As the elected government of the day, the Conservatives could have pushed through the F-35 purchase. In doing so, they would have violated acquisition regulations, added fuel to the opposition's fire, and contravened the opinion of two influential bureaucratic players. However, it is not unreasonable to speculate an

F-35 purchase would be optimal relative to the Liberal government's interim and long-term acquisition projects. The Liberals would have certainly continued to accuse the Conservatives of high-handed policy-making in the 2015 election campaign; but the Conservatives lost the election anyway. In that context, backing away from the F-35 deal did nothing to ameliorate the Conservative's negative image. With the PBO and OAG reports, the Conservatives were damned if they did, and damned if they didn't. The Liberal and NDP continued to characterize the Conservative government as responsible for misleading Canadians. The Liberals won the 2015 election and the way things currently look, it does not appear the Trudeau government is on-track to deliver a more capable fighter-jet interceptor, at a better price, and in a timely manner.

Overall, replacement of the CF-18s has fallen short. Originally due to retire in 2017, the CF-18s remain operational but are showing their age. Since the Liberal party took office, their actions on the file have done nothing to generate confidence the project will be completed in the near future, and within the confines of a reasonable budget. Filling a dubious "capability gap" with old, second hand, sole-sourced fighters surpasses the Conservative's botched F-35 purchase. How did Canada get to this point?

Justin Trudeau's dramatic and shortsighted campaign pledge to exclude the F-35 from an open competition was not only a promise to violate Canadian acquisition regulations, it precluded a possibly optimal policy instrument: the F-35. Without admitting any mistakes, the Liberal government retreated from that position, but the complicated political mess that unraveled does not bode well for the affordability of the overall project, let alone delivering a fighter-jet interceptor in a relatively timely fashion. Lieutenant-General Mike Hood (senior player) partly dispelled the "capability gap" myth, but the Liberal government claimed to back away from the roughly \$7 billion Super Hornet deal because of a trade dispute between Boeing

and Bombardier. The subsequent decision equaled a missed opportunity for the Liberals to do something prudent. Instead of accelerating towards an open competition, the Liberals opted to negotiate the purchase of used F-18 Hornets from Australia—essentially the same vintage as Canada’s CF-18s. This second hand deal in particular has a suboptimal quality, although it is currently difficult to judge on the metric of cost overruns. Namely, \$500 million has been set aside for the Australian F-18s, and the final price will not be disclosed until a contract is signed. Furthermore, it is an *ad hoc* addition, making it difficult to determine where it fits within the larger project’s budgetary threshold. However, this addition certainly has a suboptimal quality. The delivery date has been delayed by six months, and questions remain about the off-the-shelf usability of the Australian Hornets. They no doubt require upgrades and repairs.

Regarding the plan to purchase eighty-eight new fighter-jet interceptors, a major problem is Canada’s strained relationship with Boeing. It certainly appears Justin Trudeau discarded a possibly optimal policy instrument in his government’s handling of the dispute between Boeing and Bombardier. Instead of waiting patiently for the ITC ruling, Trudeau took an aggressive and vocal approach, which seems to have just pandered to a small domestic voting base in Montreal. Although the Liberal government later added Boeing to the list of suppliers invited to compete in the FFC Project—that is, when Bombardier received a favourable ruling from the ITC—Boeing has not yet indicated if it wants to compete to sell Canada its Super Hornet. The image the prime minister cultivated was Canada is capricious. If Boeing withholds a bid from the competition, other companies will likely factor this into their submissions, possibly driving costs up. (With history as our guide, Canada only purchases fighter-jets from the US.) The irony is a competition without Boeing would likely guarantee a Lockheed Martin F-35 win, bringing Canada back to where it was when the Liberals attacked the Conservatives for their attempted sole source

purchase. (Canada can make a sole source purchase by choice or by circumstance. The latter choice could be more costly.)

The matter of falling short of primary goals should also be addressed within the greater scheme of the replacement process. As this study goes to press, it will be at least three years before a contract is awarded, and neither the price nor a precise delivery schedule will be known until that time. One thing remains certain. The \$1.5 billion required to upgrade the current fleet of CF-18s, in addition to the \$500 million for the Australian Hornets, adds considerable expense to the roughly \$19 billion estimated to purchase a new fleet. Had the Conservatives simply pushed through their plan to buy the F-35, it is possible Canada would already be integrating brand new Lightning IIs into its badly worn fleet of CF-18s, at a fraction of the cost.

The process to replace Canada's aging fighter-jets interceptors has so far been suboptimal, and the bureaucratic politics model is helpful in providing the structure necessary to clarify why. The first attempt to replace the CF-18s was mishandled by Stephen Harper's Conservative government. It appears the Conservative government wanted to replace the CF-18s with the F-35 because, in addition to the path dependent nature of an American fighter jet—Lockheed Martin in this case—Canada's relationship with the JSF program was generating solid industrial benefits, with promising future prospects. Liberal and NDP resistance to the purchase was partly based on reports of F-35 design problems. Primarily, the two opposition parties did not approve of the sole-source, and seemingly high-priced option, and attempted to leverage this misstep into furthering their share of power. They had every right to do so. Not only is this the nature of democratic politics, federal government purchases of goods above \$25,000 require open competition. Most importantly, political opposition to the F-35 deal was bolstered by two reports

from highly influential government institutions. The PBO and OAG did not attack the JSF Project for partisan reasons. In line with the bureaucratic politics model, these public organizations influenced the outcome simply by acting within their institutional nature. By carrying out their respective mandates, the PBO and the OAG were simply maintaining their organizational well-being. Their reports however, compelled the Conservative government to back away from the F-35. The hierarchal power of the Conservative government could have ensured an F-35 purchase. By the time the Conservatives froze F-35 funding, the political costs had already mounted. Stephen Harper might have been well advised to follow through on the JSF. Had his government done so, it is possible the RCAF would already be integrating F-35s into their squadrons. The option chosen provided the Liberal government their own chance to bungle the acquisition.

The second attempt to replace the CF-18s has been worse. Since picking up the file in 2015, the Liberal government has changed directions several times, excluding and re-including America's two top fighter-jet producers as though they were friends on the Facebook page of a preteen melodrama. Trudeau's handling of the CF-18 replacement calls attention to an unfortunate trend in politicizing military procurement. The purchase of used Hornets from Australia is less about filling a "capability gap", and more about finding a cheaper alternative to the Super Hornet without accelerating to a competition in which the F-35 will likely win. Purchasing the used Hornets allows the Liberals to claim they are taking action on the CF-18 replacement file, without going back on a 2015 campaign promise before the 2019 election. (The Liberal government might hope their promise to exclude the F-35 will have been more or less forgotten by the time the FFC Project awards a contract in 2021.) It is not exactly clear Canadian voters really care what their government buys the RCAF, or any other branch of the CAFs. (This

might make for an interesting future study, surveying citizen attitudes towards procurement and the military generally.) If citizens do not actually care, the Liberals have been needlessly playing politics, wasting tax-dollars and risking the lives and safety of RCAF personnel.

The Conservative government could have rammed through the F-35 purchase. With damaging reports appearing to tip the balance in a looming election, they froze the JSF Project to save face. The *ad hoc* adjustment was fruitless. The overall lesson to governments is compete large acquisition projects. A secondary approach—albeit contradictory—might be to have the mettle to stand-by a procurement decision.

The Liberal government has found an amazing way to embarrass themselves, making decisions that call into question their credibility as stewards of defence policy, and lodestars of international trade. It will be several years before any conclusions can be drawn about the effectiveness of the Liberal government's FFC Project. However, it is fair to express concern that their handling of the trade dispute carries the potential to degrade the Canadian government's relationship with one of the only two major aircraft manufacturers in the US—the only country Canada purchases fighter-jet interceptors from. In addition, as opposition, the Liberals were critical of the Conservative's high-handed approach towards replacing the CF-18s. Deleted DND documents and public servant gag orders eroded any moral high ground once claimed by the Liberals. The Liberals will likely see themselves at the mercy of a forthcoming OAG report, roughly a year before Canadians cast ballots in a federal election. It will be interesting to see if Canadians hold them accountable on this issue.

CHAPTER 8—CONCLUSION

This study began with a question: *Why do Canada's military procurement projects often fall short of their primary goals?* Based on the results from the three cases in this study, there is no general answer to this question. Unfortunately, for this study in particular, a general answer was a component of the methodological objective. As a point of reminder, a structured, focused, comparison is designed to systematically compare cases using the same question and theoretical approach, in order to focus on certain aspects of the empirical data, determining what selected cases share in common. This was to be accomplished through application of the bureaucratic politics model. Notwithstanding the overall shortcoming of the study, the application of theory to empirical evidence does make a contribution to the growing literature on Canadian defence procurement; it was a novel approach given the empirical focus of prior literature. The bureaucratic politics model was selected for its consistency with preliminary findings vis-à-vis the research question. Each of the three cases exhibit varying degrees of suboptimality. (That is, in various ways, they each fell short of their cost and/or delivery goals.) In-line with the bureaucratic politics model, they each exhibited interaction between uniquely conditioned players. And these interactions were often competitive. In particular, the element that confounds the generalizability vis-à-vis the testing of empirical data through the bureaucratic model is the fact competition did not play a primary role in affecting the suboptimality found in the JSS Project.

With the Tank Replacement Project, competition did play a role. It was the Conservative government's morally driven desire to bolster the effort in Afghanistan—as demanded by senior military players. The domestic refurbishment goal was something the Conservatives supported. It seemed to enjoy unanimous political support. At the very least there was no observable objection

to domestic refurbishment. The goal was not met because it was impractical; partly because of time restrictions, but primarily, it was the result of Canadian industrial incapacity. The promise should never have been made, but it appears to have served the purpose of pacifying political opposition to a controversial purchase. This case possesses the hallmarks predicted by the bureaucratic politics model. Uniquely conditioned players interacted to determine the type of equipment that would replace the Leopard C2s. Competition characterized the interaction, leading the Conservative government to decontroversialize the purchase with a domestic refurbishment goal. The suboptimal quality was the partial cancellation of the refurbishment goal.

Regarding the ongoing suboptimality of the Joint Support Ship Project, the element of competition was muted. Whether a reflection of a cultural disposition favouring domestic production, or a cognitive inability to read production capacity deficiencies, unanimous support for a made in Canada approach characterized the interaction between institutions and their individuals. The result so far has been suboptimal; namely, ongoing delays are clear indicators Canada cannot rely on a single shipyard to complete such a large volume of complex industrial builds. (At the very least, Seaspan's infrastructural limitations render it incapable of currently meeting the demands of the project.) Combined with the project's cost-overruns, this suboptimal quality is illustrative of CDAI's point that procurement strategies must include risk mitigation protocols through careful consideration of supplier past performance, and allaying over-ambition by establishing realistic timelines and cash flow thresholds. There was interaction among uniquely conditioned institutions and their individuals, and in certain cases, there was competition for policy influence. The suboptimal aspect however, was a product of the made in Canada approach that led to a two-shipyard division of labour, not the supposed competition the

bureaucratic politics model predicts.⁵⁶ With this in mind, it is difficult to say whether a three-yard production scheme would have alleviated bottlenecks, especially considering Davie's cash-flow problems. Davie was able to turn their fortunes around, later converting that success into delivery of the *MV Asterix*—on budget and on time. However, this outcome for the RCN was not part of the original set of production goals. It was an *ad hoc* addition. The most interesting finding in this case is the insufficiency of the arms-length competition to decide which shipyards would participate in the NSPS—later renamed the NSS. The process was specifically designed to avoid the political interference typically seen as responsible for stalling acquisitions. Schedule slippage has occurred in spite of the heavily lauded NSPS selection process. Cost-overruns have occurred partly because the original estimate was insufficient, but it also appears the time period of the project has not helped reduce costs. Primarily, the interaction among uniquely conditioned institutions and their individuals generated a domestic build consensus, muting competition for influence over this particular aspect. Suboptimality in this sense has been the result of a combination of an insistence on a domestic build, and the two-shipyard division of labour.

The processes to replace the CF-18 fighter jet interceptors also continues to generate a suboptimal quality. In this case, the interaction among uniquely conditioned players led to fierce competition. As this competition built up over time, it drew more players into the interaction. What began as a partisan based interaction—where competition reflected disagreement over the

⁵⁶ Each of the cases say something interesting about Canadian defence procurement, and contain aspects predicted in the bureaucratic politics model. However, the Joint Support Ship Project stands alone. It confounds the ordered relationship between the variables specified by the bureaucratic politics model. With this case, the bureaucratic politics model is insufficient in elucidating the precise order of cause and effect. In spite of this shortcoming, three major findings in this study are helpful in confirming the relationship between the competitive interaction in government decision-making and problems that have typified Canadian defence procurement. Namely, reports by certain public service institutions are powerful; domestic production goals are problematic; and open competition for government contracts is essential. These three findings are confirmed in other defence procurement literature. They also illustrate the role of competitive interaction instrumental to the theoretical structure of the bureaucratic politics model.

choice of the CF-18 replacement, cost, and efficacy of the F-35—eventually courted bureaucratic input from the PBO and the OAG. Reports from these organizations damaged Conservative credibility, essentially forcing the Harper government to retreat from its original position. This decision has arguably led to more problems; possibly worse than violating the AIT competition threshold of \$25,000. Trudeau’s Liberal government has been hypocritical in its handling of the replacement, and has done nothing to improve the prospect of delivering a CF-18 replacement in a timely and cost-effective manner. What distinguishes the Conservatives from the Liberals is Harper and MacKay appeared to possess a moral drive to equip the RCAF with the best materiel available. Trudeau appears to be more interested in being re-elected, with little actual care for the state of the RCAF. The head of the air force was clear in stating the CF-18s can fly until 2025. Reading between the lines, one concludes the so-called capability gap was a fabrication to avoid an FFC Project competition result before the next election. Good politics, bad policy.

Each of these cases exhibited varying degrees of suboptimality. To put it another way, they all fell short of at least one of their primary goals. Each case demonstrated degrees of interaction among players with unique interests. And competition was a component of these interactions, though it was not always a primary factor in causing suboptimal results. As with the JSS Project, unique interests were expressed, but common among all players was support for a build in Canada approach. From the perspective of delivering on-time, and on-budget, this is a problem. (Building in Canada is not a problem if the loan goal is to build in Canada, regardless of the cost and delivery schedule.) With each of the three cases examined in this study, all players were more or less in agreement with a domestic industrial component. Similar to the Tank Replacement Project, the suboptimality of the Joint Support Ship Project is connected to the emphasis on domestic industrial participation. However, these examples are not identical.

Regarding the Tank Replacement Project, it was the prospect of purchasing more tanks that drove competition. Different players had different opinions on an appropriate replacement vehicle. Because domestic refurbishment is good for the economy, it was a means of mitigating controversy. It did not change the fact that Canada was opting to maintain a heavy battle component associated with Cold War tactics, but it did contain a promise of contracts for Canada's dwindling armour industry. It was an unrealistic promise. With the JSS Project however, uniquely conditioned players were in agreement with an entirely domestic approach. Competitive interaction was therefore muted over this particular aspect. Strangely, it was perhaps the lack of competition among players that ultimately led to schedule slippage. That is, players happily accepted a build in Canada approach when it was perhaps problematic to do so. Cost-overruns are more the result of a long and drawn out project schedule which carried an obstinate funding threshold. Similar to the Tank Replacement Project, but differing from the JSS Project, the JSF Project was contentious, partly because of the developmental nature of the F-35. In addition, a host of players were concerned with the cost of the F-35. Opposition politics served as a catalyst in initiating PBO and OAG reports, which generated findings overly problematic for the Conservative government to ignore. Unfortunately, the Liberal government's subsequent handling of the file has not improved anything. Rather, the prospect of overspending poses a greater threat now than when the Conservatives sought to sole-source the F-35.

Although overall optimality was not a factor in any of these cases, the Tank Replacement Project, and the Joint Support Ship Project had some positive results. Although the Leopards were delivered to Afghanistan one month behind schedule, they filled a crucial security role on the battlefield, and will continue to serve the Canadian Army for the near and foreseeable future. The support ships are nowhere near their delivery date, but the overall NSPS is advancing some

of Canada's economic goals. It also carries the potential to increase Canadian security by way of sovereign-based shipbuilding.⁵⁷

The findings in this study may not satisfy a generalized answer to the research question. However, the answers do contribute to further validating findings in the area of study. Nossal's *Charlie Foxtrot* addresses a similar problem in identifying a general cause of procurement dysfunction. He creates two categories of explanation. "**Proximate**" explanations provide more immediate causes of a particular dysfunction. "**Distal**" explanations are more general because they "are more distant from immediate causation." (Nossal 2016, 106) Under the proximate heading, institutional explanations address problems like the multiple lines of **acquisition accountability** among ministers and deputy ministers, the **understaffed bureaucracy** tasked with operationalizing acquisition goals, and the **Canadianized needs** of the Canadian Armed Forces, which challenge off the shelf shopping strategies (Nossal 2016, 89-96). Adding sealift and offshore command and control functions to the support ship challenged the JSS Project because rising costs forced the RCN to scale back these capabilities.

Also under the proximate heading, Nossal discusses the problem of acquisitions for industrial purposes, instead of strategic military reasons (2016, 96-102). The problem with the assumption that domestic production strengthens the defence industrial base is the effects are short lived. Canada's so-called shipbuilding heritage was essentially mythologized to support a

⁵⁷ The destruction of Norman's career places the on-budget and timely delivery of the *MV Asterix* in a darker place. And despite the *Asterix*'s successful contribution to the June 2018 Rim of the Pacific (RIMPAC) exercise (Werner 2018), the interim support ship's inability to deploy to the coastal regions of combat zones complicates (Berthiaume 2018) the government's objective of possessing "a fleet built around an ability to deploy and sustain two naval task groups, each composed of up to four combatants and a joint support ship." (Department of National Defence 2017, 34) Canada's blue water naval capabilities are limited, and this will remain a serious problem until the Joint Support Ship Project is completed. Full operational capability is scheduled for 2022 (Department of National Defence 2018).

domesticated NSPS. While it is true Canada has a naval shipyard component to its history, the “approach that tries to produce highly complex naval vessels once a generation” forces shipyards into a “boom and bust” cycle, downgrading and upgrading building capacity every twenty to thirty years (Nossal 2016, 100-1). In a similar vein, refurbishing Canada’s tanks at home was disturbed by a moribund armour industry.

As his third proximate explanation, political gamesmanship is the idea politicians use acquisitions to further partisan advantage instead of the national interest (Nossal 2016, 102-5). In an attempt to displace the Liberals as Canada’s natural governing party, meanwhile supporting Canadian forces’ modernization, the Conservatives neglected to include the Liberals in their proposed F-35 acquisition. They paid a price. The Liberals have been just as political. As estimates for the JSF Project revealed higher than originally anticipated costs, the Liberal party relished in Conservative discomfort, never once acknowledging the true meaning behind each of the adjusted F-35 price tags. The Conservative’s flyaway cost of \$9 billion should not have been compared to KPMG’s estimate of \$45 billion. The latter of these reflected the full life-cycle cost of the F-35 over forty-two years. The Liberals were happy to cultivate outrage over supposed Conservative disingenuousness, even if it jeopardized RCAF safety.

Nossal argues “proximate” explanations limit our understanding of the general, making it necessary to “examine a much broader range of causality.” (2016, 106) To do so he provides three brief sections entitled “The Canadian ‘Security Imaginary’”, “A Permissive Political Environment”, and “The ‘Big Eyes, Empty Pockets’ Contradiction”. Taken together, these three sections show:

Canada’s geographical position enables a luxury of choice, where military procurement is only cardinal during major conflict. In-step with voters, elected governments prioritize other spending. When they do try and purchase materiel, an ambitious mix of military and industrial goals drive efficiency down and

costs up. The outcome is a government scrambling to justify expenses amid a fury of partisan attacks. As the “will” to follow through subsidies, governments kick the can down the road for the next administration. Paradoxically, austere Canadians fail to hold parties accountable at the polls. (MacMillan 2017)

There are a lot of moving parts in Nossal’s distal explanation. Although it narrowly avoids the reductionism of his proximate category, it nonetheless challenges aggregation, making it difficult to model and confirm the argument suboptimal results in Canadian defence procurement indeed have a general cause. But this is perhaps the problem with studying Canadian defence procurement. The attempt to generalize across cases in this particular study was confounded by subtle variation in cause and effect.

To be fair, the results showed the bureaucratic politics model is not drastically far from reality. The three projects in this study were indeed populated by uniquely conditioned players. In all cases, competition played a role in at least one aspect of player interactions. The careful distinction is only two out of the three cases demonstrated suboptimality was the result of competitive interaction among uniquely conditioned players. The JSS Project flipped the bureaucratic model on its head. Instead of uniquely conditioned institutions competing to determine whether the NSPS would be a domestic or foreign built program, or perhaps a mix of both, players were in agreement on the domestic choice. Given the poor state of Canada’s shipbuilding industry, it was a choice that has so far led to schedule slippage and cost overruns. Instead of widespread disagreement, players agreed. This is why the bureaucratic model does not fully elucidate the cause of suboptimality in the JSS Project.

The bureaucratic politics model was helpful in organizing a point of focus. The contribution to Canada’s procurement literature is an attempt at model based aggregation adds a novel approach to the evolving critical mass. Preliminary research showed Canadian

procurement processes contain characteristics identified by the bureaucratic politics model. That the bureaucratic model could only answer the research question in two out of the three cases does not negate the presence of useful policy inferences. Three big findings prevail. First, reports by bureaucratic institutions like the PBO and the OAG have tremendous political capital. Whereas the auditor general found DND did a poor job identifying risks in its tank purchase, both the auditor general and budget officer concluded the government developed an inflexible costing assessment of the support ship project. PBO and OAG findings regarding the attempted sole-source of the F-35 caused irreparable damage to the credibility of the JSF Project, and temporary damage to the Conservative government. Second, domestic production schemes are noble, but sometimes unrealistic given the consistently inconsistent flow of Canadian defence spending (Berthiaume 2016). Third, competition for goods is always necessary.⁵⁸ The nature of democratic politics means opposition politicians will attack any opportunity to highlight government missteps. This is not going to change. When an elected government contravenes a simple and well-known contracting regulation with a massively expensive purchase, it is safe to assume the opposition will be unaccommodating. Politics as usual complicates any real hope of changing the nature of procurement interaction.⁵⁹

⁵⁸ Except in cases of national crisis or where only one supplier can meet the stated requirements, procurement projects must be competed as per the AIT threshold of \$25,000 for goods.

⁵⁹ One of this study's findings has potential to form a component of future research. Identified in the CF-18 replacement projects is the tendency of politicians to use procurement to advance partisan interests. (In fact, partisan interests constitute a key element in the bureaucratic politics model.) Nossal poses a question fundamental to establishing hope for improving defence procurement. That is, while Canadians accept an underequipped military in exchange for low taxes, they appear to have no trouble accepting cost-overruns resulting from partisan gamesmanship. As Nossal points out, "That paradox remains to be explained." (2016, 113) Voters form an additional player, unidentified in the bureaucratic politics model. Despite the propensity for cost overruns, Canadian voters have seemed complacent in so far as holding governments accountable. Nossal writes "electoral studies tell us that even if Canadians were angered at the way in which a particular government mismanaged defence procurement, voters generally predicate their ballot box choices on criteria other than a single salient issue." (2016, 112) Why don't Canadians care? Nossal argues it is the fault of Canadian political parties. The abysmal record of the Liberals and Conservatives means neither party is willing to rank procurement as a salient electoral issue. The NDP, Bloc Quebecois, and Green Party have virtually no interest in staking military

identity claims. I believe it would be useful to find out what amount of the tax budget Canadians would be willing to allocate to ensure their Canadian Armed Forces are equipped on time and on budget. A survey might hold the key to answering such a question.

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