SPECIALIZATION AND THE CANADIAN FORCES

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ABSTRACT

Canada is facing a force structuring dilemma. In spite of Ottawa's desire to promote international peace and stability alongside the United States and the United Nations, Canada's minimalist approaches to defence spending and capital expenditures are undermining the long-term viability of the Canadian Forces' (CF) expeditionary and interoperable capabilities. Two solutions to this dilemma present themselves: increased defence spending or greater force structure specialization. Since Ottawa is unlikely to increase defence spending, specialization provides the only practical solution to the CF's capabilities predicament. Though it would limit the number of tasks that the CF could perform overseas, specialization would maximize the output of current capital expenditures and preserve the CF's interoperability with the US military in an age of defence transformation. This paper thus argues that the economics of Canadian defence necessitate a more specialized CF force structure.

Keywords: Canadian defence; force structure; specialization; interoperability; capital expenditure

Introduction

Minimalist approaches to defence spending are a Canadian tradition. Geography, powerful allies and other government priorities have fostered a frugal defence spending mindset in Canada since Confederation.[1] Indeed, facing few direct threats, enjoying steady economic growth and being allied with two successive hegemons, Canada has had little incentive to generously fund defence. This is not to say that Canada has never invested heavily in its military. Significant Canadian contributions in the First and Second World Wars, and reactions to the Korean War and the increased Cold War tension of the early 1980s, did produce uncharacteristically high military expenditures. It is important to note, however, that these instances are exceptions, not the rule. Absent mitigating circumstances, Canadian officials have not asked "How much is enough?"; rather, as Joel Sokolsky notes, they have asked "How much is *just* enough?"[2]

Parallel with Canada's minimalist approach to defence spending is a minimalist approach to capital expenditures. Broadly defined, military capital refers to equipment and platforms used by military personnel on operations. When purchasing capital equipment, therefore, defence decision-makers are delimiting how an armed force will train and which capabilities the armed force will possess. Capital equipment, moreover, is a long-term investment. Acquiring new capital is typically a lengthy and expensive process. As a result, capital equipment is bought with the expectation that it will be in service for an extended period of time. Accordingly, the percentage of a defence budget devoted to capital expenditures is indicative of an armed forces' future capabilities. Stated simply, the amount spent on capital equipment today reveals what an armed force will be able to accomplish tomorrow. Over the past two decades, personnel and

[1] See Stacey (1981), Treddenick (1995) and Sokolsky (2002c) for an overview of Canadian defence spending attitudes and policies.
[2] Sokolsky (2002c, p.4)

operations and maintenance costs have eroded capital expenditures in the Canadian defence budget.[3] Since a high of 30% in 1983, capital expenditures have fallen to between 17-13% of the defence budget as of 2003. Hence, unless the composition of Canada's defence budget is retooled in favor of new capital expenditures or the need for new capital equipment is reduced, the long-term capabilities of the Canadian Forces (CF) may be undermined.

The CF's long-term capabilities dilemma is exacerbated by two additional factors: defence transformation and the retention of a balanced force structure. Propelled primarily by the United States, defence transformation aims to bring about a revolution in military affairs (RMA) which will alter the structure, organization and doctrines of armed forces. This information-age RMA is expected to bring about force structures and doctrines which will allow for greater battlespace awareness via enhanced command, control, communications, computer, intelligence, surveillance and reconnaissance (C4ISR), greater precision in munitions delivery, faster deployments, enhanced maneuverability, increased jointness and interoperability between services and allies, and a minimization of collateral damage. To achieve these goals, governments and defence firms are expected to increase research and development funding. Invariably, this implies that future weapons systems will be ever more costly. Coupled with DND's declining capital expenditure, therefore, the costs associated with defence transformation may result in elements of the CF not participating in the RMA.[4]

Retention of a balanced force structure further contributes to the CF's transformation challenge. Essentially, balance relates to the tasks which an armed force is expected to perform.[5] The more balanced the force, the more tasks it can accomplish. Thus, a fully balanced force is

[3] See Treddenick (1995) and Conference of Defence Associations (2002) for an overview capital's decline as a portion of the Canadian defence budget.
[4] Richter (2003, p.67-68)
[5] Grimes and Rolfe (2002, p.272)

one which can operate across the entire spectrum of conflict, from aid of the civil power to thermonuclear war. Countries who chose not to retain capabilities across the entire spectrum of conflict engage in varying levels of specialization (defined as force structuring around specific capabilities). The difference between a fully balanced force and a one task force is thus a matter of degree. In the 1994 *White Paper*,[6] Canada chose to preserve a *relatively* balanced CF force structure. The CF is expected to field multi-purpose forces capable of operating with allies across the full spectrum of conflict. In practical terms, this has meant the retention of a limited airlift and air combat capabilities, an army with heavy and light armored units, and a navy with medium force projection capabilities. Politically, the current force structure has value since it allows the CF to participate in a variety of missions. Economically, however, DND's capital budget is at pains to meet the equipment needs of all three services.[7] Too often, the services must make due with cost-saving modernization programs instead of new systems. Unfortunately, modernization only delays the inevitable; new capital must eventually be purchased to ensure long-term capabilities. Indeed, when combined with the demands of defence transformation, the maintenance of a balanced force structure presents Canada with a seemingly insurmountable obstacle: Not only must DND meet the capital requirements of its three services, but to participate in the RMA it must also be prepared to purchase especially expensive equipment. Taken together, therefore, Canada's minimalist approach to defence expenditure, truncated capital equipment budget and the requirements of defence transformation suggest that it is worthwhile to examine the merit of greater CF specialization.

This paper argues that specialization offers Canada a way to optimize its military expenditure. Rather than attempt to meet the needs its current force structure, DND can preserve

[6] *1994 Defence White Paper* (1994)
[7] Conference of Defence Associations (2002, p.8-27)

the long-term viability of the CF by concentrating its capital allocation on specific capabilities. It is also argued that greater specialization can and should be undertaken within the confines of current Canadian defence policy; for, as noted by Grimes and Rolfe, "a country's optimal defence structure will depend on factors such as the extent and nature of its alliances and on the regional and broader foreign policy objectives to which defence forces might contribute."[8] Thus, specialization must be considered in light of the CF's domestic responsibilities, continental defence obligations and interoperability with the United States military.

The structure of the paper is as follows: Section 2 outlines the determinants of force structuring. This serves to highlight relations between small and middle power force structuring, defence objectives, alliances and coalitions. Section 3 examines Canadian defence policy. Here it is shown that current Canadian defence spending is rational, and is thus unlikely to significantly increase in the future. In addition, Canada's policies regarding domestic operations, continental defence and interoperability with the United States are examined. This provides an overview of current CF force structuring and shortfalls. Lastly, section 4 provides suggests a model of CF specialization that is likely to emerge over the next decade unless significant changes are made to the size or distribution of the defence budget.

Determinants of Force Structuring

Force structuring decisions are essentially defence and foreign policy choices made within a defence budget constraint. Theoretically, rational decision-makers would prefer to have all possible force capabilities available to pursue the policy objectives of the state. Unfortunately, finite defence budgets require that force planners consider the trade-offs associated with the tasks

[8] Grimes and Rolfe (2002, p.273)

assigned their armed forces. In essence, therefore, force structuring should be understood as opportunity cost dilemma.

The force structuring choices confronting defence planners result from national and alliance considerations. At the national level, geography, threat levels and internationalist inclinations present defence planners with a number of objectives to meet. Unfortunately, for small and middle powers in particular, budget constraints demand that planners be selective about which force capabilities can be maintained to fulfill these competing objectives. A partial solution to the opportunity cost dilemma is found in alliances and coalitions. If part of an alliance or coalition, states can collaborate on common defence objectives. Small and middle powers are especially advantaged by allying themselves with larger powers. Doing so allows small and middle powers to concentrate on a limited number of affordable defence tasks, while having their interests protected by larger allies. To benefit from alliances or coalitions, however, small and middle powers typically lose some measure of flexibility in their force structuring choices. Taken together, therefore, national, alliance and coalition considerations form the opportunity set within which force structuring decisions are made.[9]

National Factors

Territorial defence, sovereignty protection and internal security are the primary military obligations of governments. As a result, the standard rationale for the maintenance of armed forces lies with their national defence function. Sovereignty and security are thus the principle determinants of force structuring. It therefore follows that forces are firstly tailored on account of two factors: the type of territory to be defended and the threat posed by hostile parties.

Geographically, all states encompass some amount of territory and airspace. The type of territory needing to be defended molds composition of national defence (differentiated from

[9] Grimes and Rolfe (2002, p.272-281)

expeditionary) forces. Factors such as strategic depth, the location of mountain ranges or large bodies of water and climate can all affect the makeup of national defence forces. Landlocked countries, for example, do not require maritime forces to defence their territory. Switzerland, for instance, fields only land and air forces. Consequently, the Swiss military is more specialized than that of a country bordering water. Nonetheless, given Switzerland's geography, this specialization is rational.

Alongside the type of territory to be defended, states also respond to the types of security threats they face when structuring their forces. Intrinsic to the notion of national defence is that the state must be defended against something, be it a hostile country, non-state actor or an internal insurgency. Thus, the defence of the state can only be understood with reference to a threat. Derivatively, national defence forces are tailored to meet the particular threat facing the state. In truth, threat levels tend to play a greater role than geography in determining force structures; whereas geography helps determine which roles the armed forces should be able to perform in defence of national territory, threat levels impact on both the tasks assigned to the armed forces and the amount which is spent on them.

Threat levels also account for force structuring which extends beyond mere territorial defence capabilities. Since states can have interests beyond their territory, threats to extraterritorial interests compel governments to maintain forces capable of operating beyond their borders. The history of the United States is telling in this regard. Prior to the Cold War, the Unites States favored a relatively small peacetime military. Though territorially large, the relative isolation of the North American continent meant that the United States faced few threats to its territory. In addition, the United States held few overseas interest beyond those articulated in the Monroe Doctrine. Once the Cold War began, however, the overseas interests of the United

States extend across the globe. As a result, the United States committed to a military capable of operating worldwide and across the entire spectrum of conflict. Threats to extraterritorial interests therefore account for why countries expect armed forces to accomplish more tasks than are required to defend their sovereignty.

Beyond raw interests, states who seek prestige or moral accolades may further desire that their armed forces contribute to global peace and stability via the United Nations (UN). Given that the UN does not have standing forces of its own, it is not possible for states to foster interoperability with the UN. At best, defence planners can coordinate with other countries who contribute to a particular UN mission or implement a force structure suited to peace support operations. Either way, however, participating in UN missions can present states who have few extraterritorial interest with force capability requirements surpassing sovereignty protection.

All told, national considerations can present defence planners with a variety of competing force capability demands. Operating within a fixed defence budget constraint, defence planners may be asked to structure forces capable of protecting a state's sovereignty, deter or defeat threats to extraterritorial interests or contribute the global peace and stability through the UN. Hence, in its most basic form, force structuring is an opportunity cost dilemma. It is important to note, however, that the measure of the dilemma depends on a state's military expenditure and on the degree of diffusion between differing foreign and defence policy objectives.

By en large, force structuring trade-offs are less categorical for great powers. Though no exempt from the need to chose between desired military capabilities, countries such as the United States and the United Kingdom enjoy a larger margin of maneuverability thanks to their high defence spending. That these countries are able to field fully balanced forces is demonstrative of the fewer trade-offs they face. The challenge is more acute for middle and

small powers. Unable or unwilling to meet the great powers in terms of military expenditure, these states are necessarily more discriminating about which capabilities they maintain. As modeled by Grimes and Rolfe, for example, small powers may be forced to weight their sovereignty protection versus their international interests, judge which competing force elements are less costly in producing a defence objective, or evaluate how best to structure forces in an uncertain environment.[10] Small and middle power defence planners are thus restricted by a budget constraint which discourages balance and encourages specialization.

Regrettably, however, as has been suggested thus far, a specialized force may not be able to meet all the foreign and defence policy objectives of a small or middle power. To fulfill the objectives which their independent military expenditures cannot, small and middle powers are therefore rationally driven to seek alliances with larger powers.

Alliance and Coalition Considerations

From an economic perspective, alliances are interesting as a case study in collective action. Indeed, economic studies of alliances have focused on burden sharing and the problem of free riding.[11] According to Olson and Zeckhauser (1966), the defence provided by a military alliance is a pure public good: no ally can be excluded from its benefits and the benefits are non-rival. Allies of modest finances will have a rational tendency to free ride on the defence spending of their wealthier partners. Since the threat is already being deterred by the non-excludable and non-rival efforts of the wealthier allies, smaller allies can be expected to spend less on defence than they can afford. Correspondingly, a direct correlation between Gross National Product (GNP) and military expenditure is postulated. Thus, unequal wealth in alliances necessarily implies unequal burden sharing.

[10] For a full account of these models including their mathematical representations, see Grimes and Rolfe (2002)
[11] Sandler and Hartley (1995, p.19-52)

An alternative vision of alliance burden sharing is provided by joint product models. Theorist applying joint product models argue that military alliances do not simply provide a pure public good. Instead, alliances are assumed to include impure public goods and private benefits that do not spill to all members. The stationing of allied forces on the territory of a peripheral ally, for instance, provides that ally with an extra measure of protection that is exclusionary; no other ally can benefit from those defences in the event of an attack. Hence, that specific country gains a private benefit from the alliance. Members of an alliance, therefore, have an incentive to increase their defence activities, if such activities produce advantageous impure public and private goods alongside the expected pure public good. As a result, joint product models hold that alliance members will spend a relatively equal percentage of their income on military expenditures.

Common to both these accounts of burden sharing is that countries will act as maximizing rational actors when part of an alliance. Yet both accounts also share the same limitation; they deal primarily with financial burden sharing in a collective defence regime. Hence, they offer little insight into the affects of alliances on force structuring.

In their work on small power defence structures, Grimes and Rolfe address the relationship between alliances and force structuring. Using the example of a regional security arrangement, Grimes and Rolfe examine how coordination between allies can achieve force structure economies of scale. Assuming that the countries coordinate transparently and that they can be sure of each other's reliability, this model argues that allies maximize their defence outputs if they choose to achieve a balanced force by combining their specialized forces instead of maintaining independently balanced forces.[12] Grimes and Rolfe thereby demonstrate that states have an incentive to specialize their forces and coordinate with allies to achieve a balanced

[12] Grimes and Rolfe (2002, p.275)

force structure. For smaller power in particular, the Grimes and Rolfe model indicates that it is wasteful to pursue a balanced force structure if it is possible to collaborate with a more powerful ally.

The Grimes and Rolfe model, however, is limited by its focus on the force structure requirements of a regional security arrangement. As discussed with reference to national considerations, countries can have extraterritorial interests. Yet, with the exception of great powers, few small or middle powers maintain forces capable of operating independently overseas for an extended period of time. A critical question for small and middle powers, then, is how to structure forces to operate offensively overseas alongside a great power to promote a common interest or cause. Put another way, given their limited capacity to operate overseas and the opportunity costs associated with force structuring, small and middle power have an incentive to join larger powers on expeditionary missions which fulfill a shared military objective. Technically, if a common interests exists, the smaller power could free ride, standing by as the larger power to carries the entire cost of the campaign. However, since it has a stake in the outcome of the operation, the smaller power has an incentive to be part of the campaign in order to have a say in the decisions made in its aftermath. Simply put, as long as the smaller power plays a part in the campaign, it can hope to have a 'voice' or a 'seat at the table'. The impact of alliances on force structuring thus goes beyond predetermined defensive arrangements. Small and middle power defence planners also recognize that their forces should be able to contribute to ad hoc multinational campaigns, commonly known as *coalitions*.

Though subtle, the distinction between alliances and coalitions is important.[13] First and foremost, coalitions are more ephemeral than alliances. Coalitions tend to form to achieve a limited goal, then dissipate after it has been attained. Coalitions are therefore best understood as temporary alliances. Second, coalitions need not have predetermined members or be sustained by a treaty or agreement. Coalitions thus lack the institutional characteristics of formal alliances. In this sense, the historical image which best captures the essence of coalitions is the posse of the American West. The First and Second Gulf Wars, and the war in Afghanistan are examples of coalition campaigns. In each of these cases, the United States and a multiplicity of different partners teamed to pursue a common military objective. Of particular interest in comparing these three coalitions campaigns is how they differed both in composition and formality. The First Gulf War was mandated by the UN Security Council, the Second Gulf War was not. America's North Atlantic Treaty Organization (NATO) allies France and Germany participated in the Afghan campaign, but opposed and abstained from the Second Gulf War. All three campaigns were organized in only a few months. Key to the concept of coalitions, therefore, are spontaneity and informality.

The spontaneous and informal nature of coalitions directly impacts on force structuring. For great powers, the unpredictability of coalition memberships demands that they retain forces balanced enough to conduct campaigns alone. Specifically, since a great power cannot be certain which (if any) countries will join it on a given campaign, it cannot coordinate jointly balanced force in advance. Consider the following representation: To be victorious in campaign 1, *ceteris paribus,* country A recognizes that it needs capabilities λ and Φ. To minimize its costs, country A has an incentive to coordinate its force structure with country B, such that country A provides

[13] The Concise Oxford Dictionary, for example, defines an alliances as "joining in pursuit of common interests; league, association." Coalitions, on the other hand, are defined as "temporary combination of parties that retain distinctive principles."

capability λ and country B provides capability Φ. However, owing to the uncertain nature of coalitions, country A cannot be sure that country B will be part of the campaign. Hence, though it is more costly, country A must maintain both capabilities λ and Φ if it is to be victorious in campaign 1.

Coalitions affect small and middle power force structures differently. Assuming that a campaign is too complex to be undertaken independently, the rational choice for small and middle powers is to structure specialized expeditionary forces which are interoperable, but not fully integrated with, the forces of a great power. This is an optimal choice for small and middle powers on account of two factors. First, given that great powers will retain forces balanced enough to win a campaign alone and that small and middle powers may not wish to participate in every great power campaign, non-integrated forces permit the smaller power to abstain from campaigns which are not in its interest. Second, if the smaller power chooses to be part of the campaign and have a 'seat at the table', specialized interoperable forces can be incorporated with the forces of the great power without any complications related to incompatible training, doctrines or equipment. Hence, if the smaller power abstains from the campaign, the great power is not affected; if the smaller power does participate, the great power gains additional forces but is not inconvenienced. Consider the following representation: To be victorious in campaign 1, *ceteris paribus,* country A recognizes that it needs capabilities λ and Φ. Country C specializes in capability λ. Yet, since country A cannot rely on country C to be part of campaign 1, country A chooses to keep both capabilities λ and Φ. If country C abstains from the campaign, country A is nonetheless victorious. If country C participates, coalition forces combine to provide capabilities 2λ and Φ, thus also ensuring victory. Whichever choice country C makes, therefore, country A wins the campaign.

To get a 'seat at the table', therefore, small and middle powers have an incentive to structure interoperable forces. Doing so, however, imposes force structuring restraints on the smaller power. As noted by Grimes and Rolfe, interoperability implies that the smaller power conforms to its ally's expectations and technological requirements. Hence, a smaller power may be required to purchase costly equipment. In turn, the equipment costs limits the number of tasks assigned to forces. Consequently, interoperability can push a smaller power towards a specialized force structure. Owing to these factors, a smaller power's force structuring opportunity set is truncated by the demands of interoperability.

In sum, the determinants of force structuring are numerous, complex and oft competing for the same defence budget funds. While the defence expenditures of great power can typically support a balanced force structure able to meet territorial and regional defence requirements, alliance and collective security demands and independent expeditionary forces needs, small and middle powers are compelled to be more selective in their force capability choices. While alliances and coalitions offer smaller powers a measure of relief and a greater say in international affairs, interoperability can confine their forces to a limited number of tasks. Collectively, therefore, a small of middle powers' diffuse military objectives ensures that force structuring presents itself as an opportunity cost dilemma. Moreover, as pertains to expeditionary forces, interoperability with alliance and coalition partners pushes small and middle powers towards specialized capabilities.

Canadian Defence Policy

Canadian defence spending is a popular target among critics. Canada spends approximately $12-13 billion CDN on defence. Coming in at approximately 1% of GDP, Canadian military expenditures are often assailed for being only slightly higher than those of

NATO's smallest member, Luxembourg. Accordingly, Canada is routinely accused of being a NATO free-rider. Moreover, in light of the fact that the CF's operational tempo increased while the government cut its budgetary allocations, critics have argued that the Canadian military is not only underfunded but also unappreciated, overstretched and on the verge of collapse unless it receives a steady infusion of monies. Indeed, even though the government has spent more on national security post-11 September, critics continue to express concern that Ottawa is neglectful of the military, thus endangering the long-term viability of the CF and Canada's international standing.

While critics are right to worry about shortfalls plaguing the CF, calls on the government to increase defence spending are inconsistent with Canada's political and systemic realities. Domestically, the Canadian public is supportive of more defence spending, but not at the expense of health and education programs, which are thought to be under funded.[14] Internationally, the CF successfully performed the tasks assigned it by the government between 1993-2002. Whether in Bosnia, Haiti, Kosovo or Afghanistan, the CF consistently did more with less, giving the government no impetus to invest more in the military. Politically, therefore, the government sees no compelling reason to reconsider its funding of defence.

Furthermore, as relates to comparisons of Canadian military expenditures with that of its NATO allies, reference to defence spending as a percentage of GDP obscures a contextualization of Canada's strategic situation. When measured in real USD, Canadian defence spending ranks sixth in NATO. The top four NATO spenders are the United States, the United Kingdom, France and Germany. Each of these countries is a great power, save for the United States, which is the world's sole superpower. Clearly, Canada, a middle power, cannot be expected to spend as much on defence as a great power. NATO's fifth highest spender is Italy. Like Canada, Italy is a

[14] Staples (2002, p.6)

middle power. Canada and Italy, however, do not exist in similar environments. Italy shares the Adriatic sea with the Balkans, historically one of the world's most volatile regions; Canada lives peacefully next to the United States in North America. It is therefore sensible that Italy spends more on defence. On the whole, then, if considered in real USD, Canadian defence spending is consistent with Canada's geostrategic realities and place in the international system.

Truth be told, both sides of the Canadian defence spending debate have valid points. On the one hand, supporters of the government are right that Canada spends a rational amount on the military. On the other hand, critics are correct that the CF's long-term viability is questionable if the status-quo prevails. The fact which allows both these assertions to be true is as follows: Though Canada funds defence adequately, it does not spend its defence funds optimally. More precisely, though Canada spends a rational amount on defence, the CF retains wasteful capabilities which is does not need to accomplish its defence policy objectives.

Objectives and Force Structure

Canadian defence policy expects the CF to accomplish three broad tasks:[15]

- Defend Canada
- Contribute to the defence of North America, in co-operation with the United States
- Contribute to international peace and security

Thanks to the relative isolation of North America, threats to Canadian territory sovereignty are few. No hostile states border Canada, and most foreign incursions into Canadian waters are commercial rather than military. Moreover, though the terrorist attacks of 11 September highlighted the presence of asymmetric threat to North American security, the nature

[15] 1994 *Defence White Paper* (1994)

of terrorism is such that conventional military capabilities provide only a limited defence against it. While conventional forces do help, the brunt of domestic counterterrorism efforts are carried by police and intelligence agencies. Accordingly, the CF is not structured to mount an earnest, independent defence of Canada. Instead, the CF's domestic responsibilities focus on search and rescue, aid of the civil power, consequence management, support of other government agencies and territorial and exclusive economic zone (EEZ) surveillance.

As can be expected, elements of the CF force structure reflect these domestic responsibilities. The Canadian Air Force maintains 18 CP-140 Aurora maritime surveillance aircraft[16] and 15 new CH-149 Cormorant search and rescue helicopters. The Canadian Navy recently acquired 12 Kingston Class Maritime Coastal Defence Vessels (MCDVs) and four Victoria class submarines for EEZ surveillance. Within DND, the Office of Critical Infrastructure Protection and Emergency Preparedness (OCIPEP) helps coordinate consequences management efforts alongside the nascent Disaster Assistance Response Team (DART) and Joint Nuclear, Biological, Chemical Defence Company. Army units across the country are also available to respond to a variety of contingencies, including domestic disturbances and environment disasters. Lastly, a special force unit, Joint Task Force 2 (JTF2), offers counterterrorism and hostage rescue capabilities.

Considering the number of newly purchased platforms and recently formed units, it is evident that the Canadian government is mindful of the CF's domestic functions. Although Canada is not directly threatened by a foreign military, the government understands that the CF is still essential to the security and safety its citizens. Consequently, domestic operations will remain an important part of defence budget and CF force structure.

[16] It should further be noted that the CP-140 Auroras are undergoing an incremental modernization.

Since the Basic Defence Plan of 1941, Canada and the United States have jointly defended North America. The principle symbol of their joint continental defence commitment is the binational North American Aerospace Defence Command (NORAD), established in 1957 to monitor and intercept Soviet bombers. Working within the NATO structure, Canada and the United States also cooperated in the maritime defence of North America. Following the events of September 2001, homeland defence returned to the forefront of American defence policy. In October 2002, United States Northern Command (NorthCom) was 'stood-up'. NorthCom is responsible for the defence of the continental United States and coordinating aid of the civil power and consequence management efforts.[17] Although NorthCom is a uniquely American command, its appearance has lead to renewed interest in joint Canada-US continental defence efforts. Officials in both Ottawa and Washington have expressed a desire to work more closely in defence of the continent. At this time, NORAD continues to coordinate joint continental air defence. To examine continental land and sea collaborations, Canadian and American officials formed a new Binational Planning Group (BPG) in late 2002. Thus far, the BPG has agreed that consequence management teams from both countries will be able to mount cross-border operations in the event of a terrorist attack or natural disaster.[18] The BPG is also expected to establish an expanded maritime security mechanisms.

As part of its NORAD mission, the CF fields four CF-18 squadrons located at Cold Lake, Alberta and Bagotville, Quebec. Currently, 80 CF-18s are undergoing a modernization program which will keep them in service until 2017-2020. Beyond the CF-18s, new continental defence initiatives arising out of the BPG are unlikely to significantly affect the force structure of the CF. On land, joint consequence management efforts will involve already formed Canadian units,

[17] For a full account of the NorthCom mission, see Lagassé (2003)
[18] Lagassé (2003, p.20)

such as the DART. At sea, the MCDVs, the Victoria submarines and the Auroras will probably be called upon. Stated plainly, when it negotiates new joint continental defence initiatives, DND will offer only those units that already serve to defend Canada. Unfortunately, it is unlikely that Canada and the United States will agree to a combined balanced force following the Grimes and Rolfe regional security model. After September 2001, the United States will not rely on another country for any aspect of its defence. No matter how transparent or reliable, having Canada provide a specialized capability given up by United States to avoid duplication and pursue economies of scale is not politically sailable. Irrespective of the costs involved, the United States will maintain a full balanced continental defence force. On the whole, therefore, joint continental defence with the United States impacts little on CF force structure.

Contributing to international peace and security, though ranked third among DND's objectives, has a strong influence on force structuring. During the Cold War, Canada's commitment to NATO's collective defence was its most important contribution to global security. Both in Europe and the north Atlantic, the Canadian military worked with its NATO allies to mount a credible deterrent against Soviet aggression. As part of its membership obligations, the Canadian military followed NATO weapons standards and doctrines. In addition, NATO membership encouraged Canada to specialize its military tasks. Notably, the Canadian Navy focused on anti-submarine warfare (ASW) in the north Atlantic. Canada was also an early proponent of UN peacekeeping. Beginning with the 1956 Suez crisis, the Canadian military was deployed throughout the world to separate belligerents and promote stability.

The end of the Cold War brought about a mixture of change and continuity in Canada's overseas missions. In 1993, the CF was withdrawn from Germany, a decision which seemed to indicate that Canada would be less involved in European affairs. Yet, by 1992, the CF was back

in Europe as part of the UN Protection Force (UNPROFOR) in the former Yugoslavia. Canadian soldiers have remained in Europe since, contributing to NATO's Stabilization Force (SFOR) in Bosnia and participating in NATO's Kosovo campaign. Beyond Bosnia, Ottawa also committed the CF to an assortment of UN peace support operations. From Somalia, Haiti, Cambodia to East Timor, Canada continued its efforts to help stabilize violate states and regions.

A significant charge, however, did occur in Canadian peacekeeping. As noted by Sokolsky, the 1990s witnessed the 'Americanization' of peacekeeping. Washington used its military to enforce UN mandates, resulting in a more 'robust' form of peacekeeping in Somalia, Haiti and Bosnia.[19] Indeed, under American leadership, peacekeeping evolved to include both the traditional 'blue helmet' UN missions and new 'green helmet' NATO operations. The Kosovo campaign illustrates this phenomenon well. Still labeled a 'peace enforcement' operation by some, "the fact remained that this was a war against a sovereign country without a UN mandate."[20] For its part, Canada embraced Americanized peacekeeping. Working with the United States on UN sanctioned missions was ideal; Canada preserved its image as a peacekeeper, while its military solidified ties with American forces. Even without a UN mandate, Ottawa agreed to be part of the American 'posse' in Kosovo. Increasingly, therefore, Canadian contributions to international peace and security took place within the confines of American-led coalitions. This trend continues with the current war on terrorism.

In late 2001, the United States and its allies went to war against Afghanistan's Taliban regime and the Al Qaeda terrorist group whom the Taliban was sheltering. Unlike the ambiguous campaigns of the 1990s, the aim of the Afghan war was clear: the United States sought to destroy those guilty for 11 September. Foremost amongst those the United States'

[19] Sokolsky (2002a, p.394-398)
[20] Ibid, p. 396

allies in Afghanistan was Canada; not only did Ottawa signal its desire to be part of the coalition early on, the government was also unabashed that the CF were going to Afghanistan as warfighters. As part of Operation Apollo, the CF thus committed a number of combat forces to the Afghan campaign. Though the CF's land force contribution to Afghanistan had to be withdrawn after only one rotation due to budget constraints, Canada nonetheless showed that it is willing to war (and thus not only peacekeep) alongside the United States.

Yet, as Canada's absence from the Second Gulf War coalition further shows, Ottawa will not join all American posses. Instead, Canada plays the part of the independently-minded middle power, abstaining from or joining coalitions depending on its national interest or political proclivities. Militarily, pursing this flexible participation policy has meant focusing on interoperability the United States military. Following the coalition model provided above, Canada has linked, but not tied, itself to the world coalition leader in order to secure its overseas interests and to be recognized as an independent international player. As outlined by DND's *Strategy 2020*, Canada aims to "[s]trengthen our military relationship with the US military to ensure Canadian and US forces are inter-operable and capable of combined operations in key selected areas."[21] To accomplish this aim, *Strategy 2020* further notes that the CF must maintain a "relevant force structure" which is "affordable over time."[22] An examination of Canada-US interoperability shows that the prospect of fulfilling the *Strategy 2020* varies among the CF's three services.

Of the CF's thee services, the Navy is the best equipped to operate with the United States. The Navy's twelve Halifax class frigates, for example, were specifically designed to integrate into American carrier battle groups. Similarly, Canada's four Iroquois destroyers recently had

[21] *Shaping the Future of the Canadian Forces: A Strategy for 2020* (1999, p.5)
[22] Ibid.

their command and control systems upgraded, allowing them to serve as guided-missile area air-defence destroyers interoperable with the United States Navy (USN). On account of force structuring and modernization efforts, the USN ranks the Canadian Navy as "high-end."[23] This classification has permitted the Canadian Navy to interoperate with the USN on various campaigns. Most recently, the Canadian ships have worked with the USN in the Arabian sea for almost two years as part of the war on terrorism. Indeed, each of the Navy's active destroyers and frigates has done a rotation as in the Arabian sea since October 2001. With respect to its ships, therefore, the Canadian Navy is fulfilling the interoperability vision outlined in *Strategy 2020*.

The Navy's principle shortfalls relate to personnel and helicopters. At present, DND is unable to recruit enough sailors to man all its ships. Consequently, one of Canada's four destroyers is not on actively duty as of this writing.[24] Canada's aging Sea King maritime helicopters are the best publicized of the CF's equipment deficiencies. Originally, the helicopters were to be replaced in 1993. When the Liberal party assumed power that year, however, the helicopter replacement project was cancelled. Since that time, DND has been looking for a less costly helicopter which meets the needs of the Canadian Navy. Given that the Sea Kings were first purchased by the navy in 1963, replacing them is considered a matter of some urgency.

Unlike the navy, the Canadian Air Force is facing several force structuring difficulties. During the Kosovo campaign, Canada's CF-18 were shown to be behind most NATO fighters' technology. As mentioned, this reality has led the government to modernize 80 CF-18s. These upgrades are to keep the CF-18s in service until 2017-2020. What is unclear at this time, however, is whether Canada will be in a position to purchase new fighters once the CF-18s are

[23] Sokolsky (2002b, p. 12)
[24] *Conference of Defence Associations* (2002, p. 10)

decommissioned. Among defence industries, the aerospace industry is marked by the highest level of inflation and research and development costs. Hence, it is questionable whether Canada will be able to afford technologically advanced fighters in the future. Moreover, as noted by Andrew Richter, United States Air Force (USAF) plans to incorporate a new generations of fighters, the F-22 Raptor and Joint Strike Fighter (JSF), before the end of the decade. The technological standards of these aircraft will be "well beyond the capability of the CF-18s."[25] Thus, even though they are being modernized, Canada's fighter aircraft will soon be too antiquated to interoperate with their American counterparts.

Airlift capabilities are another difficulty facing the CF. Canada's principle transport aircraft are its CC-130 Hercules. Purchased incrementally since the 1960s, the CC-130 fleet is increasingly unreliable. Moreover, these planes provide only tactical lift. To make up its strategic lift needs, the CF relies on American and other NATO aircraft, or rentals of An-124 Ruslans from Anatov, a Ukrainian corporation. At present, it is unclear how DND plans to address its airlift predicament. No replacement has been planned for the CC-130, though the latest version of the Hercules, the CC-130J, is an option. As for strategic lift, the government has stated that Canada cannot afford to purchase its own strategic lift aircraft. Instead, DND is examining NATO strategic lift sharing arrangements.[26]

Owing to the price of aerospace equipment, the Canadian Air Force is unlikely to be part of *Strategy 2020*'s interoperability vision. While the CF-18s continue to be vital for Canada's NORAD obligations, their future role in overseas campaigns is questionable. As mentioned, once the USAF acquires the JSF, the CF-18s will be outdated. Likewise, Canada's airlift capability is in need of rejuvenation. Unless the CC-130s are replaced or refurbished, the CF will lack reliable

[25] Richter (2002, p. 83)
[26] *A Time for Transformation: Annual Report of the Chief of the Defence Staff* (2003, p.12, 23)

tactical lift. Coupled with the fact that the CF already relies heavily on the United States for strategic lift, an erosion of the CF's tactical lift capability renders Canada a burdensome ally. Indeed, there may come a time when the United States military is unable to transport Canadian forces to a theater of operations. Should this happen, Canada may miss the chance to be part of a campaign it deems morally imperative or important to its interests.

Canada's Army stands between the Navy and the Air Force with respect to interoperability with the United States. On the one hand, the equipment maintained for high-intensity land warfare is obsolete. Canada's main battle tank, the Leopard C1, for example, was acquired two decades ago. Given the changes in tank technology that have occurred since then, "the Leopards are a marginal weapon at best on the modern battlefield."[27] Similar problems present themselves with the Army's other dated platforms and command and control systems.[28] On the other hand, however, the Canadian Army's decision to train along American lines allows Canadian light armored and infantry units to operate closely with the United States Army (USA) in low-intensity conflict settings. As Richter observes, this accounts for the ease with which the Canadian Army operated with the USA in Afghanistan.[29] Furthermore, the Army's Light Armored Vehicles (LAV) III and Coyote reconnaissance LAVs represent the latest in light armored technology. Indeed, the success of the LAV III design is attested to by the fact that the USA is purchasing them as part of its transformation towards light, rapidly deployable,

[27] Richter (2002, p.79)
[28] The operational strains of the Canadian Army should not be overlooked. Though these difficulties are not directly related to force structuring or specialization, they are essential to an understanding of why the Army is considered to be the most troubled service. Operationally, the Army has been driven the hardest between 1993-2003. On account of the operational tempo they have been asked to maintain, the Army is finding it difficult to sustain its deployments. Whereas the Navy was able to continue its commitment to Operation Apollo for over two years, for instance, the Army was forced to withdraw its contribution after a single rotation. Part of the reason this was the case was that the Army also had deployments in Bosnia at the time. Critics argue that the Army's inability to be part of two missions for an extended period is indicative of the services' underlying poverty. DND also acknowledges that the Army is confronting operational hurdles. Yet, since the government is unlikely to ease CF deployments absent an operational crisis, the Army is unlikely to be assigned fewer missions. Ironically, as long as the Army shows it can perform admirably under duress, the less incentive Ottawa has to reduce deployments.
[29] Richter (2002, p.80)

maneuverable land forces. Hence, while interoperability between the Canadian Army and the USA is increasingly unlikely at higher points on the spectrum of conflict, Canada's land forces can interoperate with the USA in low-intensity conflicts and operations other than war.

Overall, contributing to international peace and stability via interoperability with the United Stated military impacts greatly on CF force structuring. As outlined in the 1994 *White Paper* and *Strategy 2020*, Canada contributes to global security by working with other likeminded nations. Since the early 1990s, Canada's partner of choice has been the United States. Consequently, the CF force structuring is and will be guided by considerations of interoperability with the United States military. Of the three services, the Navy exemplifies the impact of interoperability on force structuring. Canada's Halifax frigates embody the linkages that the CF hopes to foster with the American armed forces. The frigates can 'seamlessly' join an American carrier battle group, but the USN does not rely on them. Thus, the frigates offer Ottawa a wide margin of maneuverability. If Canada joins a coalition, it sends the frigates and they interoperate with the USN. If Canada does not join a coalition, the USN is unaffected. The frigates are thus an ideal instrument for Canada as an independently minded middle power; being interoperable but not integrated with the USN allows Ottawa to chose which tables it wishes to sit at.

The essential force structuring question facing the CF, then, is whether its current capital budget allows the other services to follow the Navy's lead. For the Air Force, the answer is no. Until the CF-18s are replaced in 2020, Canada's air combat capability will not meet the USAF's transformational standards. And as pertains to airlift, the diminishing utility of Canada's aging CC-130s limits not only CF deployments, but also tactical lift contributions that Canada might

make to a coalition campaign. Most importantly, a danger exists that Canada's lack of reliable airlift might make it a burdensome ally.

Canada's Army is in a better position. While the Army is will not be interoperable with the USA in high-intensity conflict environment due to the obsolescence of its heavy armor, common training practices and the acquisition of technologically advanced LAVs allows the CF's land forces to interoperate with the USA in low-intensity conflict settings. Hence, unless the CF invests in new heavy armor, interoperability with the USA can only occur on the lower end of the spectrum of conflict.

It is important to recall, however, that current capabilities are not indicative of future interoperability between the Canadian and American armed forces. To stay interoperable in the future, the CF needs to invest in capital which will meet future American standards. The current state of the Canadian armed forces shows that DND's capital budget is incapable of keeping the entire CF force structure interoperable. In truth, if DND attempts to modernize all of its current capabilities, it may result in a CF which is unable to keep up with the United States military at all. Stated differently, if the DND capital budget is spread too thin, the CF may lose the select interoperable capabilities it already has. Indeed, as defence transformation advances, the CF will likely need to purchase new equipment more often to stay interoperable with the American armed forces. This suggests that Canada will focus its capital expenditures on a smaller number of capabilities. Simply put, Canada is likely to see a specialized force structure as a means of ensuring its future interoperability with the United States. In addition, however, a more specialized CF force structure must also be able to fulfill Canada's principle defence policy objectives, namely, the defence of Canadian territory and the defence of North America in conjunction with the United States.

Principle CF Platforms (2002-2003)[30]	
Service	*Platforms and Systems*
Army	114 *Leopard* Main Battle Tank 1,214 M113 Armoured Personnel Carrier 269 *Grizzly* 195 *Cougar* 199 *Bison* LAV-APC 203 *Coyote* LAV (Reconnaissance) 150 *Kodiak* LAV III
Navy	12 *Kingston* Class MCDVs (Coastal Defence) 4 *Iroquois* Class DDHs (Destroyers) 12 *Halifax* Class FFHs (Frigates) 2 *Protector* Class AORs (Provision) 2 *Victoria* Class Submarines
Air Force	122 CF-18 *Hornet* (All-purpose fighter) 32 CC-130 *Hercules* (Tactical airlift) 5 CC-130H(T) *Hercules* (Tanker) 18 CP-140 *Aurora* (Maritime Patrol) 5 CC-150 *Polaris* (Air-to-air refueling) 15 CH-149 *Cormorant* (Search and rescue heli.) 29 CH-124 *Sea King* (Maritime patrol helicopter) 75 CH-146 *Griffon* (Utility helicopter)

Specialization, Transformation and Canadian Defence

To meet its territorial and continental defence obligations, the CF needs a force structure with air and coastal defence capabilities, aid of the civil power, search and rescue and consequence management units. In practical terms, this means that the CF requires, and will require, enough fighter-interceptors to meet the needs of NORAD, MCDVs and submarines, search and rescue planes and helicopters, and disaster relief units such as DART. In sum, the CF

[30] Based on the figures provided by the International Institute for Strategic Studies' *The Military Balance, 2002-2003* (2002)

cannot eliminate any of the capabilities it currently maintains for the defence of Canada and North America. Greater specialization will therefore take place in the CF's expeditionary forces.

In order to 'contribute' to international peace and stability, a middle power like Canada need only maintain enough forces to be relevant and be seen. That is to say, Canada requires only enough forces to be seen as a respectable member of a coalition and, therefore, earn a 'seat at the table.' Correspondingly, Canada's coalition contribution do not need to be decisive for victory. Indeed, in order to maintain a flexible coalition policy, Canada will not seek to maintain forces that are necessary for a campaign; for if they are necessary, Canada's coalition allies will expect them to be part of the campaign regardless of Ottawa's potential misgivings. Moreover, as discussed above, states who lead coalitions (in our time typically the United States) cannot afford to rely on foreign armed forces to achieve victory, so they maintain all capabilities to win a campaign unilaterally. Thus, for Canada to field more forces than are necessary to be seen and/or valued is a wasteful duplication of forces and DND funds. In addition, to minimize complications, Canada must maintain seamlessly interoperable forces and be able to transport a large portion of its forces independently. CF force structure specialization, therefore, must be conceived of in light of these considerations.

Expeditionary capabilities that the CF will probably specialize in are those which have proven themselves to be interoperable with the U.S. military and visible enough to provide Canada a 'seat at the table'. These capabilities are: light armored units; tactical airlift; and, a 'high-end' navy. Considered alongside American defence transformation goals, these capabilities offer Canada a force structure which will be both relevant and relatively cost-effective.

Army transformation in the United States focuses on the creation of an Objective Force, which "is to be based on a class of completely new platforms, collectively known as Future

Combat Systems (FCS), which are to weigh 20 tons or less."[31] The aim of the Objective Force is to provide the USA with rapidly deployable, maneuverable forces that retain the lethality of heavy amour. To accomplish both these objectives, the USA demands that FCS platforms be "sized to be transportable within the C-130 or similar aircraft" and produce a "system of systems in which manned command and control vehicles are networked with many unmanned reconnaissance assets and platforms delivery weapons,"[32] thus achieving lethality and survivability through information dominance instead of heavy armor. It is estimated that the Objective Force be complete by 2032.

Since it is an evolutionary concept, Army transformation occurs in stages. Prior to attaining the Objective Force, the USA will field an Interim Force. The Interim Force is to be composed of medium-weight Interim Brigade Combat Teams (IBCTs).[33] Like the Objective Force, IBCTs will be sized for C-130s and be rapidly deployable. Though retaining heavier elements than the Objective Force, the IBCTs nonetheless emphasize information dominance and networking. Interoperability with IBCTs will thus necessitate that allied armies invest in C4ISR-centered light armored land forces.

To remain interoperable with the USA, therefore, the Canadian Army needs lightly armored, technologically advanced, C-130 transportable platforms. Vehicles such as the LAV III thus are a step in the direct direction for the CF. Yet to keep up with the USA IBCTs and later the Objective Force, the Canadian Army will need to invest regularly in light armor technologies. To afford this, the CF will abandon heavy armor. The cost of acquiring and maintaining new tanks would undermine the CF's ability to field interoperable light armor. Similarly, as the USA increases its dependence of information technologies, training along American lines will

[31] Nardulli and McNaugher (2002, p.109)
[32] Ibid., p.113.
[33] Ibid., p.111

necessitate that the Canadian Army possess comparable C4ISR capabilities. Following the principle of being 'seen', Canada's light armored forces need not be many or decisive for a coalition victory. What is essential is that they can operate seamlessly alongside the USA. Canada's heavy armor capabilities no longer meet this criteria. Hence, to maximize capital expenditures devoted to the Army, DND announced in October 2003 that it will replace the CF's leopard main battle tanks with approximately sixty Mobile Gun System LAVs. These light armor LAVs are a variant of the Stryker LAV current being deployed by the USA.

Long-term Canada-US naval interoperability also depends on Canada's ability to conform to USN technological standards. Changes in the nature of maritime threats are directing the USN to focus its transformation efforts towards better defences, communication, and fire support. In littoral environments, the USN is increasingly concerned with anti-access threats, such as mines, submarines and long-range missiles.[34] To protect itself against mines, the USN is investigating improved hull designs and mine countermeasures. Submarine threats demand a refinement of ASW technology and doctrines. Concerns about long-range missiles have resulted in the development of the Aegis theater missile defence (TMD) system. To enhance the effectiveness of each of these defences, however, the USN recognizes that naval platforms need to be better connected to facilitate communication and response time. Essentially, naval task groups must be able to interpret and communicate information precisely in order to direct particular ships or platforms to act more quickly and effectively than the enemy. Often termed 'network-centric warfare', this principle of interconnectedness attempts to enhance current naval information technologies.

The next generation of USN destroyer, the DD(X) to be built by Northrop Grumman and Raytheon, provides a glimpse of American naval transformation. DD(X) destroyers will have

[34] O'Neil (2002, p.135)

greater stealth and precision strike capabilities than current ships. In addition, DD(X) will have air and missile defence systems, and require only a small crew. Most importantly, the DD(X) "is designed to incorporate the most advanced information technologies and fire control systems so that it can network with other combat systems and with surveillance and reconnaissance systems."[35]

For the Canadian Navy, the challenge is to ensure that its ships can continue to integrate into a USN 'system of systems'. As discussed, Canada's Halifax frigates and Iroquois destroyers are currently considered 'high-end' by the USN. Keeping the frigates up to date with USN technology will likely require regular upgrades and modernizations. As pertains to the destroyers, however, a difficult choice may await the CF. The Iroquois are scheduled for decommissioning in 2009. Ideally, the Canadian Navy would be permitted to acquire new destroyers, perhaps even a variant of the DD(X). However, given current fiscal realities, the CF may be unable to do so. Either way, the CF will, in all probability, ensure that its frigates and MCDVs remain interoperable with the USN. As demonstrated in the Afghanistan, naval interoperability provides the CF with visible and sustainable campaign contributions. Hence, spending sparse capital to ensure that Canadian frigates can continue to integrate into American carrier battlegroups is a wise investment, both financially and politically.

Lastly, the future of the Canadian Air Force must be measured against the transformational aspirations of the USAF. Like the USA and the USN, the USAF sees greater information management, survivability, speed and precision as the ends of its transformational efforts. In the air, these goals are sought through the research and development of ever more accurate munitions and sensors, new stealth and information technologies, an expansion of strategic and tactical airlifts capabilities, and doctrine and training refinements. Emphasizing

[35] Zimet (2002, p.138-39)

precision and surveillance has led to USAF to invest in technologies such as unmanned aerial vehicles (UAVs), Joint Surveillance Target Attack Radar System (JSTARS), and GPS guided joint direct attack munitions (JDAMs). Munitions delivery will continue to be the task of both fighter aircraft and bombers, though bombers are likely to a more prominent munitions delivery role in the future.[36] In addition, fighter aircraft are expected to emulate the stealth technology of the F-117 and B2 bombers. Stealthy fighters, the USAF estimates, are needed to overcome anticipated advances in air defence and airspace denial technologies. Finally, the USAF hopes to acquire a greater number of strategic and tactical lift aircraft. Doing so will allow for a more rapid deployment of American forces.

Participating in overseas campaigns with the USAF is unlikely to remain an option for the Canadian Air Force. While Canada's CF-18s may be modified to allow for the use of JSTARS and JDAMs, they will not be suitable for sorties with the USAF once the F-22 and JSF are deployed. More critically, purchasing the a significant number of JSFs under current capital allocations could jeopardize the existence of most other DND acquisitions and modernization projects. Simply put, keeping up with the USAF might make future interoperability with the USA and USN impossible for the CF. As a result, the CF's expeditionary fighter aircraft capability may be at an end.

Air assets that are essential for the CF are tactical lift aircraft. Increasing the CF's ability to transport itself independently is important since it reduces American impressions of Canada as a burdensome ally. Indeed, excessive reliance on American airlift might cast Canada as an unwanted coalition partner, one who drains strengths instead of bolstering it. That said, it may be too expensive for Canada to have both a tactical and strategic lift capability. If forced to choose, tactical lift is the best option. Following the transformational vision of the USA, the next

[36] Ochmanek (2002, p.186-87)

generation of land forces will be light armored units designed to be transported in C-130 tactical lift aircraft. Thus, if the Canadian Army fields similar light armored units, tactical lift airlift should provide an adequate, though not ideal, transportation solution. To accommodate those units that do require strategic lift, such as the Coyote, strategic lift sharing arrangements may be a cost-saving venture. Continuing to rent An-124 Ruslans on a mission-by-mission basis may also be more fiscally responsible than maintaining a fleet of strategic lift aircraft. Arguably, it would be wasteful for the CF to maintain an independent strategic lift capability if a majority of its land forces are C-130 transportable. Thus, the CF can be expected to allocate enough capital to retain an independent tactical lift capability, either by revamping its current CC-130s or acquiring new C-130Js. Without the added burden of purchasing new fighter or strategic lift aircraft, this may be possible within the current capital budget constraint.

In sum, this model of CF specialization predicts that Canada sacrifice expeditionary fighter aircraft, strategic airlift and heavy armor in order to maintain light armored units and a navy interoperable with the United States military. It is further argued that the CF will maintain an independent tactical airlift capability to avoid becoming a burdensome coalition ally. Retaining these select capabilities will not allow the CF to participate in every type of overseas operation. Nor will the CF be able to fight a high spectrum campaign alone. Yet, since the aim of this specialization model is to provide the CF with forces interoperable with the USA and USN, Canada may still be able to play a respectable and visible role in future American-led coalitions. Such an objective is consistent with the vision put forth in *Strategy 2020* and the 1994 *White Paper*. Moreover, specializing in expeditionary capabilities does not undermine an effective defence of Canada or North America. Most importantly, given that Canadian defence spending is unlikely to increase substantially and that capital expenditures are only 13-17% of the DND

budget, specialization presents itself as a rational way to field a technologically advanced, reliable and visible CF in an age of defence transformation.

Conclusion

Canada is an internationally minded middle-power with a traditionally minimalist approach to defence spending and capital expenditures. Taken together, these realities complicate Canadian force structuring decisions. As an opportunity-cost dilemma, force structuring demands that defence planners weight the benefits of various military capabilities. The smaller the defence and capital budget, the more constricted the force structuring opportunity set. In the 1994 *White Paper*, the Canadian government committed the CF to a relatively balanced force structure. Time has shown that the government anticipated a larger force structuring opportunity set than its defence expenditures actually provided. As a result, many of the CF's current platforms are technologically sub par. In and of itself, obsolete equipment is not problematic as long as defence objectives are being met. Canada, however, seeks to contribute to international peace and security by working alongside the United States. For its part, the United States military is undergoing an extensive technological and doctrinal transformation of its forces. To be able to interoperate with the United States, therefore, Canada must maintain capabilities of equal technological prowess. A solution which presents itself is greater specialization. By concentrating funds on a limited number of capabilities, specialization maximizes the output of capital expenditures. Stated simply, specialization prevents capital expenditures from being spread too thin. Thus, though specialization would limit the number of capabilities the CF possesses, it would ensure that its remaining forces are interoperable with the United States military. The CF could then better contribute to international peace and stability, thus meeting the defence policy objectives of the Canadian government.

In conclusion, while specialization is politically distasteful and seen by some as a sign of disengagement, the economics of Canadian defence suggest than specialization is a rational and optimizing choice for the Canadian Forces.

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