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CANADIAN FORCES COLLEGE / COLLÈGE DES FORCES CANADIENNES

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IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF DEFENCE STUDIES:

**SPLITTING THE DIFFERENCE:
THE ARMY AND
EMERGING CANADIAN FORCES
STRATEGY**

**L'ARMÉE TERRESTRE ET
L'ÉMERGENCE DE LA
STRATÉGIE DES FORCES
CANADIENNES: A PART ÉGALE**

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ABSTRACT

Since 1994, The Department of National Defence has demanded that the Army, within the structure of an affordable CF, become capable of adapting to a future oriented defence structure within a changing strategic environment. The Army meanwhile has continued to develop an unsustainable force employment model with direct linkages through the Cold War back to the end of World War II. This situation has led to a gap between the emerging CF strategy and the Army's force employment concept. The gap highlights the divide between a CF goal to obtain an affordable, expeditionary capable, knowledge based, information-centric force, and the Army's continued determination to build an infantry-based force optimized for conventional operations in a Cold War style environment. The Army must re-focus to provide modern useful and affordable expeditionary forces that will likely be smaller than the traditional brigade group. The essential measure of success for the Army is its ability to align itself with the CF strategic vision.

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INTRODUCTION

“The CF must be shaped into a **joint, combat ready force**, capable of defending Canada and its surrounding oceans, and capable of **rapidly** deploying within Canada and abroad. Its overall size and structure must be achieved from within the present defence budget of approximately \$12 billion and designed to give the government the widest possible range of options when facing national or international situations.”¹

The Defence Studies Committee of the Royal Canadian Military Institute. 27 June 2001

On 9 November 1989, the Berlin Wall fell marking the beginning of the end of the Cold War that had existed between the United States and the Soviet Union and their respective allies for over 40 years.² No one within the Army or the Canadian Forces (CF) could have foretold that 13 years later the Canadian Army would be conducting its first combat mission since the Korean War in the complex environment typical of the mountainous Hindu Kush and the Sulaiman Range of South Eastern Afghanistan.³ Wisely, the 1994 White Paper on Defence identified just this sort of contingency when it noted, “(i)t is impossible to predict what will emerge from the current period of transition, but it is clear that we can expect pockets of chaos and instability that will threaten international peace and security.”⁴ Since 1994, senior officers within the CF

¹ The Royal Canadian Military Institute, “A Wake up Call for Canada The Need for a New Military,” *A Proposal by the Defence Studies Committee of the Royal Canadian Military Institute*. 27 June 2001 [journal on-line]; available from www.rcmi.org/archive/part1.pdf; Internet; accessed 20 November 2001.

² Heiko Burkhardt, *Berlin Wall On-Line*. 2002 [Berlin Wall on-line]; available from <http://www.berlinwall.ws>; Internet; accessed 15 March 2002.

³ Stephen Thorne, “Canadian Forces Launch 1st High-Altitude Assault in Eastern Afghan Mountains,” *The Kingston Whig-Standard World News*. 13 March 2002 [newspaper on-line]; available from <http://www.southam.com/kingstonwhigstandard/newsnow/cpfs/world/020313/w031330.html>; Internet; accessed 15 March 2002.

⁴ Canada. *1994 Defence White Paper on Defence*, [government on-line]; available from http://www.dnd.ca/admpol/pol_docs/94wp/white_paper_94.html; Internet; accessed on 20 March 2002.

have reiterated this view on numerous occasions. Vice-Admiral Garnett, at the time the Vice-Chief of the Defence Staff stated in spring 2001 that, “(o)ur world has changed. The CF no longer faces a simple static threat from traditionally structured forces.”⁵

With this understanding of the evolving strategic environment, the CF has clearly articulated the likely force employment requirements and resource allocations available to the Commander of the Army with which to design a relevant army for the 21st Century. While the El-Qa’eda terrorist organization was not specifically identified as the military adversary of the future, the Department of National Defence and the CF did recognize that the likely adversary of the future would not be fielding motor rifle and tank divisions against the Western powers as the former Warsaw Pact threatened to do during the Cold War.

At the same time, the Army has not been capable of effectively demonstrating the ability to adjust to the evolving strategic environment nor has it designed an affordable force structure that can achieve the vision consistently articulated in official policy since 1994. The Army continues to focus its combat development efforts towards the fielding of a brigade group against a Cold War style opponent. This has continued despite the fact that while large numbers of troops have been deployed overseas in a variety of missions in the 1990s, there has not been a single operational brigade deployment since the Korean conflict. The future of the brigade group itself has become an issue; as Joseph Jockel has observed, “the government may not want to continue to pay for them, especially since the defence budget will have to be increased to maintain current commitments.”⁶ The Prime

⁵ Vice-Admiral G.L. Garnett, “The Canadian Forces and the Revolution in Military Affairs: A Time for Change,” *Canadian Military Journal*. 2 no.1 Spring 2001 [journal on-line]; available from http://www.journal.dnd.ca/vol2/no1_e/rev_e/rev1_e.html; Internet; accessed on 24 January 2002.

Minister of Canada has made clear that increased funding is not likely even with higher operational tempo stemming from operations in Afghanistan and the Arabian Sea, following the events of 11 September 2001.⁷

This situation has led to a gap between the emerging CF strategy and the Army's force employment concept. The gap highlights the divide between a CF goal to obtain an affordable, expeditionary capable, knowledge based, information-centric force and the Army's continued determination to build an infantry-based force optimized for conventional operations in a Cold War style environment. This paper will contrast the two principle means available to the Department of National Defence to formulate strategy. They comprise budgetary planning and policy development. Both methods when analysed confirm the validity of the CF's appraisal of the need for transformation in order to achieve the demands of both budgetary limitations and the requirement to develop new structures and capabilities to address the identified emerging strategic environment. For the Army the Cold War experience has had a profound impact on its development. The Cold War has left the Army with a legacy force designed for operations in Europe against a conventional foe. This force does not achieve the aims of the CF and is acknowledged by the Army to be unsustainable; yet it retains its appeal for a generation of senior Army leaders. Finally, a comparison of what the CF has determined to be the future for the institution as a whole with what the Army is preparing to contribute highlights the conflicting priorities of the two organizations.

⁶ Joseph, T. Jockel, *Hard Choices, Soft Power*. (Toronto, On: The Canadian Institute of Strategic Studies, 1999): 4.

⁷ Robert Fife, "No More Money For Defence: PM Says," *National Post Online*. 19 March 2002 [newspaper on-line]; available from <http://www.NationalPost.com/home/story.html>; Internet; accessed on 19 March 2002.

PART ONE: THE DEPARTMENT

“Post-Cold War defence policy for Canada can be based on voluntary acts and on the idea that Canada does not need to maintain a multicapable “general purpose” armed force for a wide range of challenges. Rather, Canada, within a strategy of choice, could concentrate its national military efforts on capabilities and could design an armed forces suited specifically to Canada’s national interest.”⁸

Douglas L. Bland, 1995.

The Department of National Defence has endured a period of turmoil since the end of the Cold War and the return of Canadian troops from garrison duty in Germany in the early 1990’s. One of its greatest challenges has been to bring about the restructuring of the CF into a useful instrument of government policy in the 21st century, within a constrained budget. Analysts such as Douglas Bland have argued that concepts such as “total war, national mobilization and long-lasting interstate war” are no longer the criteria required to measure how to structure and employ the CF.⁹ This section will explore the environment, both financial and strategic that has influenced the development of defence policy through to today. It will argue that the Canadian Government has since the 1960’s been and continues to be consistent in its allocation of financial resources to the Department and the CF. It will also argue that extant policy is unambiguous in the type of forces Canada will require to remain relevant in the post Cold War era.

⁸ Douglas L. Bland, *Chiefs of Defence, Government and the Unified Command of the Canadian Armed Forces*. (Toronto, On: Brown Book Company Limited, 1995): 276.

⁹ Douglas L. Bland, “Funding Canada’s Defence Policy,” *Research Papers*. 09 November 2001[university on-line]; available from <http://www.stratnet.ucalgary.ca/ccs/default.htm>; Internet; accessed on 11 December 2001. 5.

1.1 The Defence Budget

“One of the differences between the United States and Canada in the post-cold war world is that the Americans like to pay for armed forces but don’t really like to deploy them, whereas Canadians like to deploy their armed forces but not especially to pay for them.”¹⁰

Joseph T. Jockel, 1999.

Throughout the 1990s funding for the CF declined dramatically. Estimates of overall reductions are in the 30 percent range and have lead some leading analysts to speculate that Canada has suffered a loss of credibility with her allies.¹¹ What is certain is that to conduct any study of the challenges facing the CF today requires an understanding of the fiscal pressures that the organization faces. This analysis of the defence budget will argue that it is unlikely that there will be substantial change in the allocation of resources to the Department of National Defence. Any flexibility in funding therefore will have to be found internally, with personnel expenditures as the most likely source.

1.1.1 Canadian Defence Spending Trends

Canadians have traditionally looked upon defence spending as a largely discretionary activity. Figure 1 highlights the fluctuation in defence spending since 1965 and is indicative of the fact that the CF has been asked to contribute with financial cutbacks when fiscal pressures have led to overall reductions in federal government spending. The oil crisis in the 1970s and excessive government debt in the 1980s and early 1990s led to a substantial ebb and flow in defence budgeting. “(T)he major downturn in Canadian Defence spending in 1995, is a result of the serious, and eventually effective, effort of

¹⁰ Joseph T. Jockel, 9.

¹¹ David Bercuson, “Review of Defence Priorities Long Overdue,” *National Post*. 09 November 2001. [newspaper on-line] ; available from <http://www.nationalpost.com>; Internet; accessed on 11 December 2001.

Liberal Finance Minister Paul Martin.”¹² The major decline in defence spending following the Finance Minister’s actions resulted in a drop of, “a full 23 percent, from \$12 billion a year in 1993-1994 to \$9.4 billion in 1998-1999.”¹³ This management philosophy, where defence spending has been used to offset other challenges within government, has meant that successive “governments are content to provide what is available for national defence, not what is needed for national defence.”¹⁴

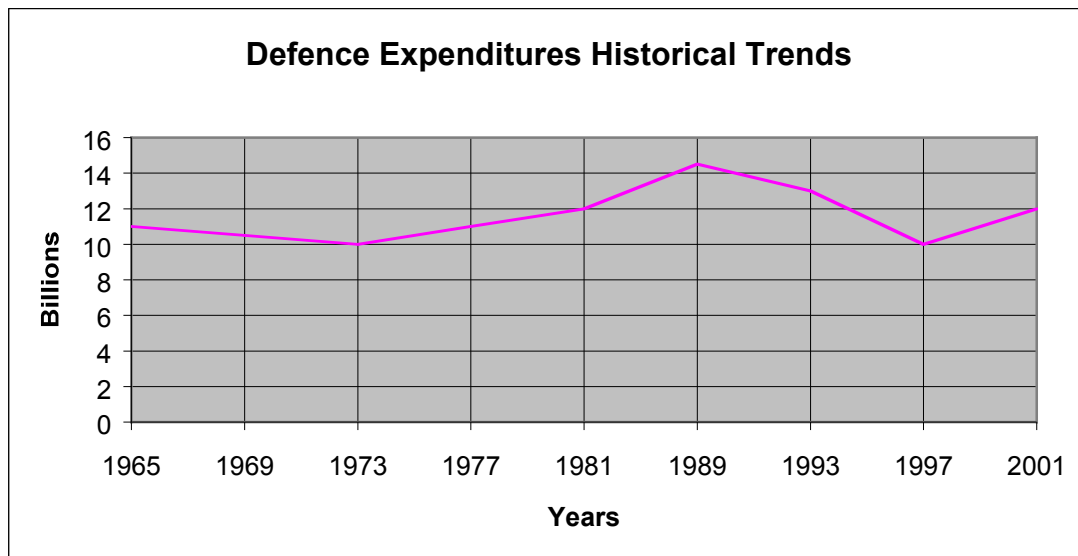


Figure 1. Defence Expenditures.

Reproduced from Canada, Department of National Defence. *Making Sense Out of Dollars*. 2001 [government on-line]; available from http://www.forces.ca/admfincs/financial_docs/msood/t-of-c_e.asp; Internet; accessed on 19 April 2002.

From 1945 onwards, but in particular during the 1970’s and 1980’s, Canada invested less than 2 percent of its gross domestic product in the CF compared with approximately the 4.5 to 5 percent invested by its North Atlantic Treaty Organization

¹² Joseph T. Jockel, 13.

¹³ Ibid, 13.

¹⁴ “Funding Canada’s Defence Policy,” <http://www.stratnet.ucalgary.ca/ccs/default.htm>.

(NATO) partners.¹⁵ This spending record consistently placed Canada at the bottom of the Alliance in terms of national funding for collective defence.¹⁶ The average of 2 percent gross domestic product that was invested annually is significant because it occurred when the Soviet Union and its Warsaw Pact allies posed the greatest threat to Canadian national survival. This funding trend during a period of moderate to high tension, indicated to her allies that Canada was prepared to invest less than half of the 5 percent gross domestic product average that was the norm within the alliance for defence spending. With the decline of the Soviet Union and the eventual end of the Cold War in 1989-1990, much of the rationale for continuing the modest 2 percent funding model ended. Fully aware of the public's priorities, the federal government reduced funding for defence during the 1990s from approximately 2 percent of gross domestic product in 1990 to 1.2 percent in 2000.¹⁷ This has led to a decade average of just under 1.5 percent compared to the NATO average of approximately 2.78 percent.¹⁸ Budget forecasts in Defence Planning Guidance 2001 project stable defence spending near 1.1 percent over the next 5 years.¹⁹ During the 1990's, Canada reduced funding for defence at a level consistent with the decrease in the NATO

¹⁵ Joseph T. Jockel, 14.

¹⁶ Lieutenant-Colonel Robert Blair, "The Path of Change," *Logistics Quarterly* 7 iss 3 Summer 2001 [journal on-line]; available from <http://www.lq.ca/issues/fall2001/articles/article06.html>; Internet; 22 January 2002.

¹⁷ Lieutenant-Colonel Robert Blair, <http://www.lq.ca/issues/fall2001/articles/article06.html>.

¹⁸ NATO Parliamentary Committee, "Table 2: Defence expenditures as % of Gross Domestic Product," *Draft Report: Defence budget Trends Within the Alliance* 25 September 2000 [report on-line]; available from <http://www.naa.be/publications/comrep/2000/at-254-e.html#tables>; Internet; accessed 23 January 2002.

¹⁹ Canada. Department of National Defence. *Defence Planning Guidance 2001*. (Ottawa, On: Department of National Defence, 11 April 2000): 1-2.

overall average. From these statistics it is evident that Canada has historically financed its defence at approximately 50% of its major allies funding levels.

The end of the Cold War reinforced the feeling of invulnerability of Canadians. Yet, polls conducted throughout the 1990's indicated a high desire for a capable armed force that would be available to support peace operations and maintain Canadian standing within the international community. Typical responses included,

“95 percent of Canadians agree that it is important for Canada to maintain a modern, combat-capable military establishment, 94 percent agree that peacekeeping requires combat-ready forces, and 92 percent believe that it is important for the Canadian Forces to be able to protect human rights in fragile democracies. In a similar vein, 90 percent of Canadians expect the Forces to be called upon to do more in the next decade, 90 percent support Canada's participation in NORAD, and 88 percent agree that a strong military is important to Canada's international standing.”²⁰

Despite the lack of direct threats to Canadian security, the Canadian people desire a real role for Canada and the CF within the international community. However, the expectations and desires of Canadians to participate within the international arena have not translated into a desire to fund the capability required to do so. Canadians have traditionally placed their spending priorities on the financing of programmes related to the health and welfare of Canadians. “Public support for increased capital spending on defence equipment lost to every other alternative offered. Issues such as youth employment, childcare benefits and supporting the film industry consistently outranks military spending.”²¹ When asked what the spending priority of the federal government should be with reference to the potential \$95 billion surplus between 2000 and 2005, “Increase

²⁰ Martin Shadwick, “Canadians and Defence” *Canadian Military Journal*. 1 no 2 Summer 2000 [journal on-line]; available from http://www.journal.dnd.ca/vol1/no2_e/columns_e/col3_e.html; Internet; 23 January 2002.

²¹ Brian MacDonald, “Will Canada’s Forces Have What They Need When They Need It?” *Policy Options*. Ed. B. Watson (Montreal, QC: Institute for Public Policy Research, March 2001): 37-38.

spending on Canada's military" was placed in first position by only 15.6 percent of those interviewed."²²

Nevertheless, the Government of Canada has and will continue to deploy forces abroad in a wide range of scenarios because of the popularity of doing so amongst the general Canadian public. This action however, comes with a price tag both in human and resource terms. Notwithstanding the immediate reaction to the events of 11 September, a real increase in defence spending would be inconsistent with Canada's historical funding rate since World War 2. With no increase in spending forecasted for the immediate future there is an even greater requirement to understand how the Department apportions the current budget.

1.1.2 Defence Budget by Major Category

The defence budget is linked principally to personnel, operations and maintenance, and long-term capitalization divided between the CF of today and the potential CF of tomorrow as shown at figure 2.

"Another way to view defence allocations is to see them as expenditures for the present force and expenditures for the future force. In other words, some part of every annual allocation is consumed by the present force – currently enrolled personnel (military and civilian) and O&M at home and for ongoing overseas operations. Some funds from each annual budget are allocated at the same time to the future force; that is, to equipment, infrastructure, sustainment stores (i.e. operational ammunition, etc.) and to war and other contingency plans."²³

Changes in the defence budget will affect all three areas with associated impact on the capabilities of both the present and future force. Each year personnel costs account for

²² Ibid, 38.

²³ "Funding Canada's Defence Policy," <http://www.stratnet.ucalgary.ca/ccs/default.htm>.

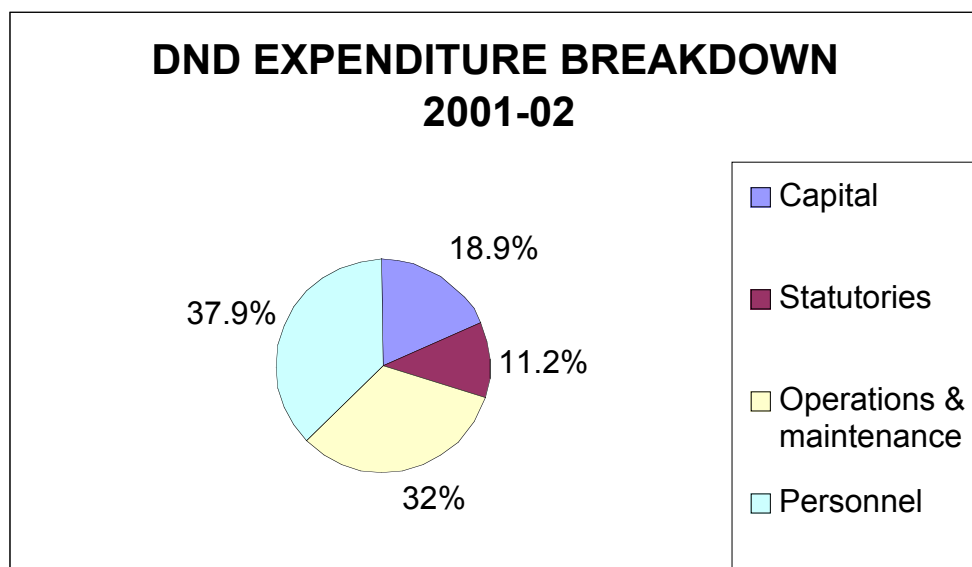


Figure 2. Defence Spending.

Reproduced from Canada, Department of National Defence. *Making Sense Out of Dollars*. 2001 [government on-line]; available from http://www.forces.ca/admfincs/financial_docs/msood/t-of-c_e.asp; Internet; accessed on 19 April 2002.

between 30 and 40 percent of the defence budget. “(P)ersonnel costs are generally fixed by government policies on numbers of members in the Canadian Forces and public servants in DND and by current wages and benefits.”²⁴ Expenditures on personnel include pay, allowances and benefits.²⁵ The reduction of CF personnel levels from 85,000 to 60,000 all ranks during the 1990s was clearly identified as a means to achieve efficiency, with money as the main driver, rather than any decrease in demand for CF service at home and abroad.²⁶

As the greatest single expenditure area within the defence budget, funding for personnel is a prime candidate for seeking savings when compared with the other major

²⁴ “Funding Canada’s Defence Policy,” <http://www.stratnet.ucalgary.ca/ccs/default.htm>

²⁵ Ibid.

²⁶ Dr Pierre Martin and Dr. Michel Fortmann, “Support for Involvement in Canadian Public Opinion after the Cold War,” *Canadian Military Journal*. 2 no.3, (Autumn 2001): 47.

categories. Costs for operations are accepted as the price of being engaged, while capital costs are programmed years in advance. Personnel costs are perceived as a ready target that can be increased or decreased much more readily with little risk. Analyst John Treddenick calls this the “man the arm approach,” he asserts that the alternative is to maintain stability in personnel levels which will result in only marginal enhancement in technological capability.²⁷ This could prove extremely risky given the requirement

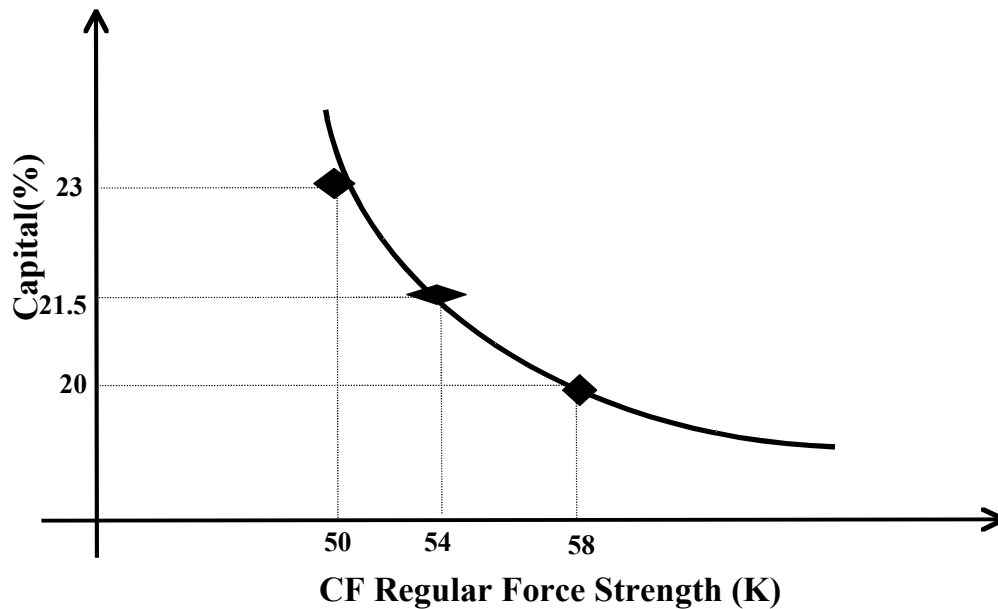


Figure 3. Canadian Forces Forecasted Capital Expenditure Versus Personnel.

Reproduced courtesy of Directorate Land Strategic Plans 3, June 2001.

for interoperability with the increasingly high-tech United States Army. Figure 3 clearly indicates the relationship between personnel levels and capital expenditures for the Department as it strives to ensure adequate capital funding for the CF.

Operations and maintenance calculated before overseas operations are factored in

²⁷ John M. Treddenick, “Distributing the Defence Budget,” *Issues in Defence Management*. Ed. Douglas L Bland. (Kingston, Ontario: Queen’s University School of Policy Studies, 1998): 74. The ‘Man the Arm’ model puts the burden of inflation on manpower expenditures while the ‘Arm the Man’ model sets the manning level first and then after operating costs are calculated, dedicates the remainder to capital.

require in excess of 30 percent of the budget.²⁸ Operations and Maintenance includes money allocated to the daily upkeep – the housekeeping budget – of the CF and to ongoing operations.²⁹ While historical calculations have pegged operations and maintenance costs at approximately 30 percent of the defence budget; the increasing willingness of the federal government to frequently deploy the CF on a wide variety of missions, both in Canada and abroad, coupled with the growing complexity of technological innovation required to ensure a relevant deployable capability, will drive this figure higher. As an example, CF involvement in United Nations operations alone grew to an annual cost in excess of \$130 million in the fiscal year 1993 from approximately \$10 million in fiscal year 1990.³⁰ Technologically complex equipment is now replacing relatively inexpensive if obsolete equipment also adding to financial pressure in terms of long term maintenance costs. The Coyote reconnaissance vehicle fleet, “is expected to cost \$15.4 million per year to operate and maintain – 275% more than the vehicle being retired.”³¹

The final major portion of the defence budget is capital expenditures. Capital expenditures have been funded traditionally from what is left over after paying personnel, and operations and maintenance costs. Figure 4 highlights the dramatic swings in Canadian expenditures on capital since 1960, which have ranged from 9 percent in 1972-1973 to 29 percent in 1984-1985.

²⁸ “Funding Canada’s Defence Policy,” <http://www.stratnet.ucalgary.ca/ccs/default.htm>.

²⁹ Ibid.

³⁰ Dr. Pierre Martin, 47.

³¹ Sharon Hobson, “Audit Shows Canadian Shortfall,” *Jane’s Defence Weekly*. 29 Iss. 18. ed. Clifford Beal (06 May 1998): 8.

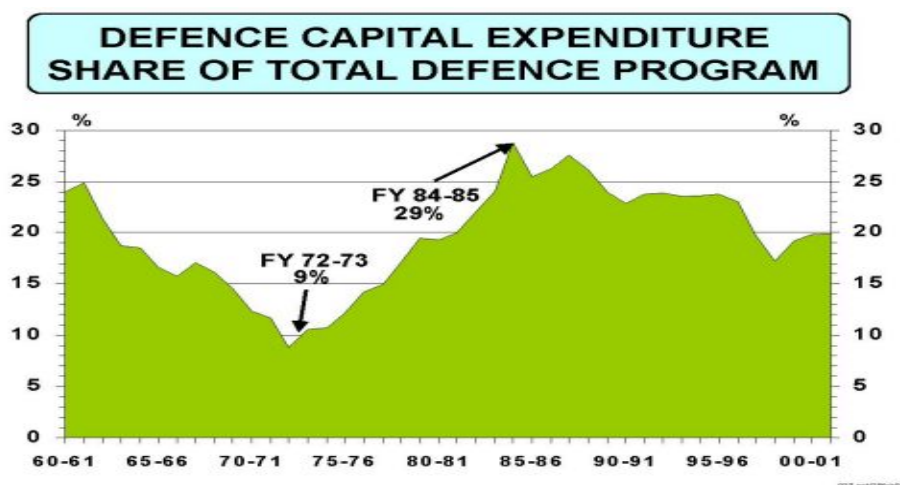


Figure 4. Defence Capital Expenditures.

Reproduced from Conference of Defence Associations & Institute (CDAI). "Chart 12," *Reinvestment in Defence*. [charts on-line]; available from <http://www.cdai.ca/library/Fincomsubcharts.htm>; Internet; accessed on 24 January 2002.

The Minister of National Defence has stated that the CF is determined to adequately equip its force structure, and will require an increase in capital spending towards an ultimate goal of 23 percent.³² The efforts of the Department to find the funding to replace obsolete equipment underscores his statement, but is hamstrung by statements by the Prime Minister that indicates his belief that the Department is adequately funded.³³ The Auditor-General of Canada is quite clear in his statement that the department has to design a force structure that falls within its prescribed budget allocation.³⁴

Canada's overall track record on defence spending gives cause for concern. During the 1990's in particular, Canada decreased funding for defence at a level consistent with the decrease in the NATO overall average, thus maintaining its traditional low level of support

³² Canada, The Minister of National Defence, *Speech to the Canadian Defence Industries Association Luncheon*. 14 March, 2001 [government on-line]; available from http://www.dnd.ca/eng/archive/speeches/2001/mar01/14mar01lunch_s_e.htm; Internet; accessed on 11 November 2001.

³³ Robert Fife, <http://www.NationalPost.com/home/story.html>.

³⁴ Office of the Auditor General of Canada, "Chapter 10," *2001 Report of the Auditor General of Canada*. Ottawa, On: Government of Canada, 2001): 3.

for defence. As such, it is unlikely that defence will see any real growth in spending even with the impact of the tragic events of 11 September. The funding of increasingly expensive capital programmes, the costs associated with a high operational tempo and personnel demands will all have to be dealt with from within the existing resource envelope. It is from this budgetary reality that politicians, bureaucrats and military officers must formulate policy that will prepare the CF for future roles. However, their deliberations are guided by a hierarchical series of policy documents that begins with the 1994 White Paper on Defence.

1.2 The White Paper

“Often cheap and feeble, our defence policies have succeeded brilliantly. Frustrating though it is for defence advocates, Canada has usually got it right.”³⁵

Desmond Morton 1997.

The 1994 White Paper on Defence has been generally credited by critics as a useful document that effectively articulates what Canada would like and indeed expects its military forces to be capable of achieving.³⁶ This analysis of the White Paper will argue that the government has committed the CF to future participation in a wide variety of operations albeit within a smaller force structure. The CF was directed to rebalance resources and organizational focus to ensure it remained effective in its contribution to Canadian strategic aims. Priority was placed on equipping the services to maintain effective support to United Nations and multilateral operations. Finally, the 1994 White Paper gave the CF the mandate to restructure or face irrelevancy.

³⁵ Desmond, Morton. “What to Tell the Minister,” *Report to the Prime Minister*. (Ottawa, On: Department of National Defence, 25 March 1997) 11 and The Royal Canadian Military Institute. “A Wake-Up Call for Canada, The Need for a New Military,” *A Proposal by the Defence Studies Committee of the Royal Canadian Institute*. (Toronto, On: Spring 2001): 13.

³⁶ “Funding Canada’s Defence Policy,” <http://www.stratnet.ucalgary.ca/ccs/default.htm>.

The 1994 White Paper on Defence provided a clear delineation between the organization and missions of a forward deployed, Europe-centric, Cold War oriented CF and a new Canada-based, coalition, and expeditionary focussed force. The White Paper optimistically stated that the world was on track to a period of greater safety with the significant reduction of the threat of world war. Whilst the new defence reality permitted the withdrawal of the CF from Europe, it also recognized that upheaval and instability of a more localized nature would become the norm within the international community.³⁷ Furthermore, while a regional crisis would not always involve the national interest, the White Paper argued that Canadians would have an expectation of a government response to the injustices and dramatic events that modern communications would bring into Canadian homes in near real time.³⁸ Events have proven that forecast to be correct. More recent policy makers such as Vice-Admiral Garnett have acknowledged that with the elimination of the bipolar struggle between the United States and the Soviet Union, the CF no longer faces the traditional threat it had lived with since the end of the Second World War.³⁹ But, the operational tempo of the CF has since 1994, been higher than at any time in the previous thirty-five years. Operations have occurred under a wide variety of situations in nearly every conflict zone around the world.⁴⁰ The combat capability the Government has chosen to retain has had to be directed at accomplishing increasingly diverse domestic and

³⁷ Canada. *The 1994 Defence White Paper on Defence*. (Ottawa, On: Canada Publishing Group, 1994) 1.

³⁸ *The 1994 Defence White Paper on Defence*, 6.

³⁹ Vice-Admiral G.L. Garnett, "The Canadian Forces and the Revolution in Military Affairs: A Time for Change," *Canadian Military Journal*. 2 no.1 Spring 2001 [journal on-line]; available from http://www.journal.dnd.ca/vol2/no1_e/rev_e/rev1_e.html; Internet; accessed on 24 January 2002.

⁴⁰ Vice-Admiral G.L. Garnett, "The Canadian Forces More Capable In An Unpredictable World," *On Track*. 29 June 2001 [journal on-line]; available from <http://www.cda-cdai.ca/english-frame.htm>; Internet; accessed on 24 January 2002; 5.

international operations outside of high intensity war.⁴¹ This new strategic focus naturally meant changes in the CF's missions and structure were required.

1994 however, also marked a period of momentous domestic issues in Canada. Financial resources available to government were strained, forcing hard decisions on spending. The White Paper noted the high priority being placed on reducing resource demands.⁴² The ability to produce relevant military forces within a limited resource envelope, meant recognition that, "a country of Canada's size and means cannot, and should not, attempt to cover the entire military spectrum, but the CF must be able to make a genuine contribution to a wide variety of domestic and international objectives."⁴³ The method used to begin the financial belt tightening was through personnel reductions.⁴⁴ National financial constraints meant that Canada participated in the wide variety of global operations in the 1990's utilizing an increasingly smaller force structure.

The White Paper envisaged collective defence, within NATO, and multilateral operations, as the primary defensive device should any threat to Canada's security, that of its allies, or to the international environment in general, emerge. In order to assure effective alliances in a crisis situation, a meaningful force structure had to be sustained in peacetime to ensure an adequate response was available if required.⁴⁵ It did not however, include high intensity operations as the focus of that participation.⁴⁶ The Department's

⁴¹ *The 1994 Defence White Paper on Defence*, 47.

⁴² *Ibid*, 7.

⁴³ *Ibid*, 13.

⁴⁴ Canada, The Minister of National Defence, *Government of Canada's Response to the Report of the Special Joint Committee on Canada's Defence Policy*.(Ottawa On: Department of National Defence, 01 December 1994): 2.

⁴⁵ *The 1994 Defence White Paper on Defence*, 13.

⁴⁶ Joseph, T. Jockel, 33.

emphasis in 1994 confirmed the shift to multi-purpose rather than general-purpose capabilities that Jockel argues, had really begun in the 1970's.⁴⁷ The Government now argued that the strength of Canada's alliances and the new international environment with its reduced threat to Canadian security, permitted the Government to choose when and where it would commit the CF.⁴⁸ The emergence of choice in the strategic realm allowed the Government to transcend the narrow dictates of alliance commitments in the structuring and equipping of the CF. The dynamic provided by the new international situation would allow for the assumption of risk and a freedom of action that permitted the maintenance of 'unbalanced forces.'⁴⁹ The CF was given the opportunity in the 1994 White Paper to weight resources and organizational effort to remain effective in contributing to Canadian requirements. Limited priority was placed on equipping the services for high intensity war fighting. The new priority would be to maintaining effective forces to support United Nations and other multilateral operations.

The combination of the evolving international situation and financial pressures within Canada had forced dramatic change on the structure of the Department and the CF that they were ill prepared to accept.⁵⁰ Without change, the drastic down sizing of its financial baseline ensured that the CF would decline to the level of a force with a broad range of ineffective capabilities.⁵¹ The Minister of National Defence in 1994 made clear his understanding that change was essential. "We agree...that the three services need to be

⁴⁷ Ibid, 33.

⁴⁸ *The 1994 Defence White Paper on Defence*, 13.

⁴⁹ *Chiefs of Defence, Government and the Unified Command of the Canadian Armed Forces*, 278.

⁵⁰ Joseph, T. Jockel, 28.

⁵¹ *Chiefs of Defence, Government and the Unified Command of the Canadian Armed Forces*, 276.

restructured to reflect changes in the strategic environment and, more specifically, to respond to the current emphasis on peace and stability operations.”⁵² Effectively, this situation meant the CF could choose to restructure or face irrelevancy by ultimately becoming a hollowed out organization.

The skills and capabilities that Canada would retain following the 1994 White Paper had to ensure that the CF would be able to fight, ‘alongside the best, and against the best’.⁵³ The Department was tasked to provide the government with options that would ensure relevance with allies but which catered to the achievement of other Canadian objectives, specifically, assisting with overall deficit reductions.⁵⁴ Thus, interoperability became essential to working successfully with allies. By 1999, the Department had developed this concept to the point where interoperability was a key capability that had to be guarded and nurtured with emphasis on, “new military concepts, doctrine and technological change.”⁵⁵

Today, the 1994 White Paper on Defence is under fire from all fronts. Groups ranging from the Canadian Defence Associations, the Royal Canadian Military Institute and academics and pundits from David Bercuson to retired Major-General Lewis Mackenzie have all expressed concern with the future course of defence.⁵⁶ The White

⁵² *Government of Canada’s Response to the Report of the Special Joint Committee on Canada’s Defence Policy*, 2.

⁵³ Douglas L. Bland ed. *Canada’s National Defence* Vol 1. (Kingston On: School of Policy Studies, Queen’s University, 1997): 312.

⁵⁴ *The 1994 Defence White Paper on Defence*, 14.

⁵⁵ Canada, Department of National Defence. *Shaping the Future of Canadian defence: A Strategy for 2020*. (Ottawa On: Department of National Defence, June 1999): 3.

⁵⁶ These links provide the most recent work produced by The Centre for International and Security Studies, <http://www.yorku.ca/research/ionline/defense.html>. The Royal Canadian Military Institute, <http://www.rcmi.org/> and The Centre for Military and Strategic Studies, <http://www.stratnet.ucalgary.ca/>.

Paper is being attacked not for what it proposes to do, but because the government has chosen not to fund the commitments made in it. In December 2001, for the first time, Defence Minister Art Eggleton called for a White Paper review.⁵⁷ The CF's effort to achieve the restructuring and the extent of change envisioned in 1994 has not occurred.⁵⁸ Retired Admiral Robert Falls, a former Chief of the Defence Staff quoted recently in the *Globe and Mail* stated, that the effects of cuts across all capabilities have made the CF, "a miniature model of the traditional general purpose military force, one with just a little of everything but not enough of anything to be effective in any conceivable situation."⁵⁹

The 1994 White Paper on Defence demanded change in the CF mission and structure. Canada committed to participating in a wide variety of operations with a smaller force structure driven primarily by a finite resource base. Limited priority was placed on equipping the services for high intensity war fighting, instead emphasize was placed on ensuring effective forces were available to support United Nations and multilateral operations. In the final analysis the 1994 White Paper on Defence gave the CF very specific tasks and a mandate to restructure or face future irrelevancy. While, the CF has in general, been unable to fulfil that mandate, it has begun to identify critical shortfalls by the use of additional internally generated policy documents. These documents generated by

⁵⁷ John Ward, "Eggleton Seeks Major Defence Policy Review," *The Toronto Star*. 18 December 2001. [journal on-line]; available from <http://www.thestar.com>; Internet; accessed 18 December 2001. The Minister's actions impacted immediately on the Department in that an internal review that had been on going in the autumn of 2001 was suspended pending announcement of a formal Defence Review.

⁵⁸ Jeff Sallot, "Will Canada Send Soldiers to free U.S. Peacekeepers?" *The Globe and Mail*. 04 October 2001 [journal on-line]; available from <http://www.theglobeandmail.com>; Internet; accessed 04 October 2001.

⁵⁹ Allan Thompson, "Canadian Soldiers Look For Niche," *The Toronto Star*. (Toronto, Ont: The Toronto Star, 29 September 2001): K-3.

military and civilian bureaucrats are designed to address the difference between the demands of the White Paper and the realities of today. In effect they become policy.

1.3 Policy Documents

“Fundamental defence policy is set out in “white papers” and from time to time by cabinet edicts. Together they provide the foundation upon which senior officers, acting under the direction of the Chief of the Defence Staff (CDS), and officials, acting under the direction of the deputy minister of the Department of National Defence (DND), make decisions and use their discretion to address ongoing issues and new situations. But actual policy is determined day-by-day through decisions taken in the various bureaus and levels of National Defence Headquarters (NDHQ).”⁶⁰

Doug Bland 11 December 2001.

Departmental documents and their supporting tools are designed to support the direction provided by the 1994 White Paper on Defence and therefore become policy in themselves.⁶¹ This section will demonstrate that internal departmental policy documents issued since the White Paper seek to provide a future focus to the CF. The force structure model being espoused foresees a CF based upon a small, technologically superior, knowledge-based force. Capability-based, vice threat based, planning has driven the CF towards tailored forces designed for specific tasks rather than capability across the full military spectrum. This force will be prepared to act across the spectrum of conflict in concert with like-minded allies in support of Canadian objectives.

1.3.1 Shaping the Future of Canadian Defence: A Strategy for 2020

Shaping the Future of Canadian Defence: A Strategy for 2020 (Strategy 2020) represents the current departmental interpretation of the 1994 White Paper on Defence. Its arrival more than 5 years after White Paper is indicative of turmoil within the Department

⁶⁰ “Funding Canada’s Defence Policy,” 1.

⁶¹ Ibid, 1.

following a period of successive personnel downsizing and budget cuts. The aim of Strategy 2020 was to provide the CF with both direction and a connection to short and long- term actions designed to meet the demands of evolving international and domestic challenges.⁶² The Strategy seeks to identify the probable battle space of the future for the CF and thus give sufficient strategic warning to permit the Department as a whole to adapt and innovate rather than be forced to react to the unforeseen crisis of today.⁶³

Strategy 2020 clearly articulated its plan for the future through ‘Vision 2020’. Vision 2020 stressed the requirement for combat capabilities, confirmed the key observations outlined in the 1994 Defence Paper with regards to the international situation, and reaffirmed Canada’s determination to remain engaged. In addition, it stressed the importance of deployable, tactically self-sufficient units (TSSU).⁶⁴ In other words it argues for the generation of expeditionary forces that are self sufficient, designed specifically for the given mission, and capable of interoperability with our closest allies, a factor that has been made the military’s highest priority.⁶⁵ Finally, Vision 2020 laid out a blue print for the future stressing the requirement to embrace future doctrines and technologies to enhance the transformation of the CF into an “innovative, relevant knowledge-based institution.”⁶⁶ An organization designed to fight and win in the information age.

⁶² *Shaping the Future of Canadian defence: A Strategy for 2020*, Forward.

⁶³ *Ibid*, 5.

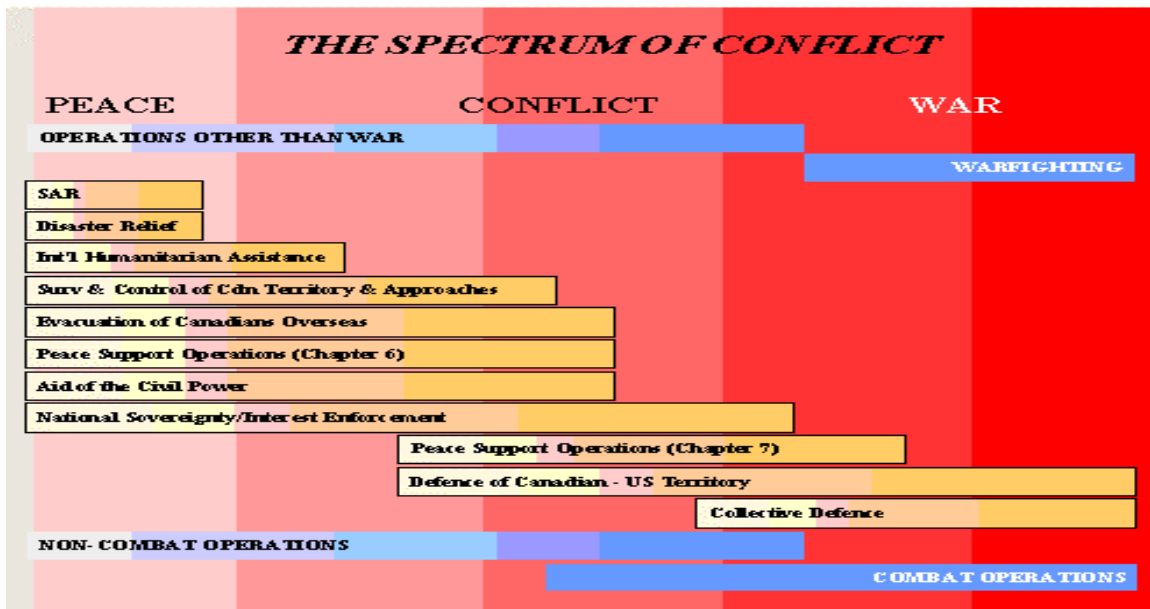
⁶⁴ “The Canadian Forces and the Revolution in Military Affairs: A Time for Change,” http://www.journal.dnd.ca/vol2/no1_e/rev_e/rev1_e.html.

⁶⁵ Col S.A. Hug, *Interoperability – the Challenge in 2010*. [government on-line]; available from http://www.vcds.dnd.ca/dgsp/analysis/challenge_e.asp; Internet; accessed 28 November 2001. Col Hug stressed that information is the key component of interoperability. The Canadian Forces must take a holistic approach to interoperability because of its potential impact on policy, organization (force development, training) and operations.

⁶⁶ *Shaping the Future of Canadian Defence: A Strategy for 2020*, 7.

1.3.2 Capability Based Planning

To ensure that the CF will be capable of generating the forces required by Strategy 2020, the CF began a process of strategic planning based upon capability requirements.⁶⁷ The required TSSU's produced through capability based planning are validated for use in the future security environment through scenario based modelling and simulations. The CF developed strategic level planning scenarios in 1999-2000 to outline the most likely situations in which capabilities and structures available within the CF could be evaluated. The eleven scenarios depicted at figure 5 spans the spectrum of conflict in a representative manner and are designed to evolve so as to reflect the dynamic strategic environment and to accommodate modifications in government requirements concerning readiness, sustainability and deployability.⁶⁸



⁶⁷ "The Canadian Forces and the Revolution in Military Affairs: A Time for Change," http://www.journal.dnd.ca/vol2/no1_e/rev_e/rev1_e.html. Capability-based planning is an evolving process based on planning scenarios and task lists. It is beyond the scope of this paper to explain this process beyond its impact on moving the Canadian Forces from a general purpose to a capability-based focus.

⁶⁸ Canada, Department of National Defence. *Defence Planning Guidance 2001*. 2-25; 2001 [government on-line]; available from http://www.vcds.dnd.ca/dgsp/dpg/dpg2001/chap2_e.asp#202; Internet; accessed 30 January 2002.

Figure 5. Force Planning Scenarios.

Reproduced from Canada. *Concept Paper - Departmental Force Planning Scenarios (FPS)*. [government on-line]; available from http://www.vcds.forces.ca/dgsp/dda/scen_e.asp; Internet; accessed 13 February 2002.

Capability based planning rose in prominence throughout the 1990s as planning staffs began to adjust from the threat-oriented posture demanded by the Cold War situation. In the Cold War environment, fiscally conservative minded governments wanted military forces that could be used in virtually all contingencies.⁶⁹ Douglas Bland notes however, that, “in a small state with limited and shrinking defence dollars the prudent approach [capable in all contingencies] will only accelerate an ever-downward spiral to a low level of many ineffective capabilities.”⁷⁰ The Vice Chief of the Defence Staff recognized that change was inevitable, “Modern militaries must be tailored to needs, needs that are very different than those for which our legacy forces prepared.”⁷¹ The long-term intention therefore is to develop only those capabilities that the government requires to conduct foreign policy.⁷² The move to capability-based force development has given some definition to what the government meant by multi-purpose forces in the 1994 White Paper.

⁶⁹ Canada. DND. DG History, “Study on a Re-organization of the Canadian Armed Forces,” Personal note, Chart III, Foulkes Papers, Integration file, 1956-57. quoted in Bland, Douglas L. *Chiefs of Defence Government and the Unified Command of the Canadian Armed Forces*. (Toronto, On: The Canadian Institute for Strategic Studies, 1995): 214.

⁷⁰ *Chiefs of Defence Government and the Unified Command of the Canadian Armed Forces*, 214.

⁷¹ Vice-Admiral G.L. Garnett, “The Canadian Forces More Capable In An Unpredictable World,” *On Track*. 29 June 2001 [journal on-line]; available from <http://www.cda-cdai.ca/english-frame.htm>; Internet; accessed on 24 January 2002. Vice-Admiral Garnett argues that military capability is not just a matter of counting numbers of personnel in uniform. Technological enablers are force multipliers leading to smaller more lethal forces.

⁷² Allan Thompson, “Canada’s Troops Fight Budget Battle,” *The Star.com*. 26 January 2002 [journal on-line]; available from <http://www.thestar.com>; Internet; accessed 26 January 2002. The main argument within this article was that the government will most likely ask the military to do almost anything but the doomsday scenario. Therefore do not waste resources preparing for the worst case.

Figure 6 provides a visual depiction of the capability goals and shortfalls of concern to the CF. The Capability Goals Matrix can be used to track progress across all desired capabilities. It is designed to assist senior leaders in assessing the disadvantages and

Level	Command & Control		Operations			Sustain	Generate	Corp Policy & Strategy
	Command	Info & Intel	Conduct	Mobility	Protect			
Military Strategic	H	H	L	H	L	L	M	H
Operational (Domestic)	H	H	M	M	M	M	M	M
Operational (Int'l)	M	M	L	L	L	M	L	M
Tactical	M	M	M	M	M	M	M	H

Figure 6. Capability Goals Matrix .

Reproduced courtesy of Directorate Land Strategic Plans 3. June 2001.⁷³

advantages of each capability goal to make informed decisions, assuming risk as required, in order to ensure continued contribution to national aims.⁷⁴ Each capability goal is linked to the Canadian Joint Task List (CJTL), which describes the related core tasks that must be performed to accomplish the goal.⁷⁵ At the tactical level, the CF is attempting to rectify deficiencies in information and sustainment goals. There is also some concern that protection of TSSUs in operations could be at risk as major equipments near obsolescence. The Department is satisfied with the ability of tactical forces to operate in the roles currently being assigned, but major concerns exist at the strategic level over information

⁷³ This table continues to undergo frequent revisions. This version was developed in December 2000. Colour coding indicates actual level of capability: Green = appropriate level of capability; yellow = one level below that desired, red = two levels below that desired. The letters L, M, and H stand for the desired capability at low, medium or high level.

⁷⁴ *Canada's National Defence*, 312.

⁷⁵ Commander R.K. Taylor, "2020 Vision: Canadian Forces Operational-Level Doctrine," *Canadian Military Journal*, 2, No. 3 (Autumn 2001): 37. The CJTL has been drawn largely from the United Kingdom Joint Essential Task List (UK JETL), is being modified to include only the tasks identified as essential to Canada's tailored capability requirements.

operations, strategic mobility and a declining manpower base within Canada. These concerns are in line with direction for change provided within Defence Planning Guidance 2001.

Force Planning Scenarios and the Canadian Joint Task List are used as tools to assess the effectiveness of the equipment within the capability goal. Approved equipment projects focus primarily on deficiencies identified in the Capability Goals Matrix. The aim of the capability-based system is to discipline processes within National Defence Headquarters so that limited available funding can be allocated to those priorities that are deemed essential to the continued relevance of the CF. If individual service demands do not comply with this aim they do not receive resource support.

1.3.3 Defence Planning Guidance

As further definition was given to the White Paper through Strategy 2020, force-planning scenarios were articulated within DPG documents as to what the CF could expect to be called upon to perform in crisis situations. DPG documents specify the funding envelopes available to each service as well as specific tasks assigned. It is through this mechanism that the generalities of the White Paper and Strategy 2020 are given substance. DPG 2001 confirmed that the types of military operations and the likely role the CF may be called upon to undertake, in the future, are changing. It acknowledged that for Canadian military forces to be effective, new technologies must be developed that will permit those forces to be employed within multinational organizations.⁷⁶ For international operations in particular, TSSUs have become the primary instrument available to the CF for deployment. TSSUs are modular, that is, able to be organized by task and able to operate under multi-

⁷⁶ *Defence Planning Guidance 2001*, http://www.vcds.dnd.ca/dgsp/dpg/dpg2001/chap2_e.asp#202, 1-3.

national command.⁷⁷ As described earlier, in both the White Paper and Strategy 2020, interoperability has grown dramatically in importance. TSSUs must be interoperable down to the lowest level of tactical command, in order to function in a combined environment.⁷⁸ DPG 2001 specifically directs service chiefs to develop force structure options to cater to TSSU oriented operations.⁷⁹

DPG direction comes in the form of a series of change objectives. The Change objectives pertinent to this study from DPG 2001 are: Change Objective 3 (C03): Modernize; Change Objective 4 (C04): Globally Deployable; and Change Objective 5 (C05): Inter-operable. Each change objective includes an explanation of what the specific objective means and what goals are to be achieved in order to accomplish it. In addition, the goals support Strategy 2020's vision by specifically directing the design of forces that will be identifiable as technological and doctrine leaders, as well as, practical and affordable. The goals demand easily deployable forces that are interoperable with the allies and the United States in particular, permitting integration with little friction.⁸⁰ Thus, DPG documents are tested through scenarios designed under capability-based planning principles to ensure they continue to consistently support the changes required by the 1994

⁷⁷ Canada, Director General Strategic Planning. *Strategic Capability Planning for the Canadian Forces*. Chapter 4 paragraph 5. 2000 [government on-line]; available from http://www.vcds.forces.ca/dgsp/dda/strat/intro_e.asp; Internet; accessed 29 January 2002.

⁷⁸ Alexander Moens, "Canada and Europe: The Primacy of the New NATO," *Research Papers*. 09 November 2001 [university on-line]; available from <http://www.stratnet.ucalgary.ca/ccs/default.htm>; Internet; accessed on 11 December 2001. Combined equates to multi-national.

⁷⁹ *Defence Planning Guidance 2001*, http://www.vcds.dnd.ca/dgsp/dpg/dpg2001/chap2_e.asp#202, 2-24. Examples of TSSUs can be found in the units of the Vanguard force. TSSUs such as the Vanguard battle group or the Immediate Reaction Force Battalion must be capable of integrating into a coalition force as a "task-tailored" unit.

⁸⁰ *Defence Planning Guidance 2001*, http://www.vcds.dnd.ca/dgsp/dpg/dpg2001/chap2_e.asp#202; 2-7 to 2-9.

White Paper and further developed in Strategy 2020. They give clear direction to service chiefs as to the direction and emphasis of change envisioned for the CF.

The Policy documents and tools described above are all designed to support the direction provided by the 1994 White Paper on Defence. They all seek to provide a future focus to the CF and instil the ability to adapt to challenges. The force structure model being espoused foresees a CF based upon an affordable, small, technologically superior, knowledge-based force. This force must be prepared to act across the spectrum of conflict in concert with like-minded allies in support of Canadian objectives concerning international security and humanitarian issues. DPG documents using a variety of assessment tools under capability based planning principles, have given clear direction to service chiefs as to the direction and emphasis of change envisioned for the CF. The CF has adopted a strategy to develop tailored forces designed for specific needs rather than attempt to obtain the full spectrum of combat capabilities. The Department and the CF have emerged from the 1990s with a plan for the future. Acknowledging that budgetary restrictions will remain in place into the foreseeable future, the CF has issued clear policy guidance designed to maximize operational capability; it remains the task of the Army together with the other two services, to adapt to the changing strategic environment in order to remain a relevant instrument of government policy.

PART TWO: THE ARMY

“The Canadian Forces have also suffered from what can be called the stress of strategic dislocation. The army was all but completely focussed on its combat tasks in Europe.”⁸¹

Joseph T. Jockel, 1999.

The effect of departure from Europe has had a profound affect on the Army. For over 40 years its ‘raison d’etre’ had been the maintenance of an infantry heavy brigade group contribution to NATO collective defence. The departure of the CF from Europe and rise of multilateral operations combined with drastic reductions in personnel and funding has the potential to threaten the traditional expeditionary brigade group concept: the core role identified by the Army.⁸² This section will look at the experience of the Army since World War 2; the combat development process that will carry the Army well into the 21st Century; and finally sustainability challenges that continue to hinder Army effectiveness both today and into the future. It argues that the Army has not been able to adapt in structure nor for the most part, in its thinking, to reflect the emerging strategic environment identified by the Department and the CF. The Army’s combat development process has been unable to determine what role land forces must be prepared to perform in the future and has used the Cold War scenario as a natural default setting. Finally, the Army has failed to innovate despite a growing crisis in its ability to be sustained in its present form.

⁸¹ Joseph, T. Jockel, 28.

⁸² Ibid, 124.

2.1 50 Years of Consistency: The Cold War Legacy

“The army has since WWII been organized based on an open terrain manoeuvre model and all units designed to maximize their capability for that kind of operation.”⁸³

Lieutenant-General M. K. Jeffery, 22 February 2002

The Chief of the Land Staff has stated his view that the Canadian Army of today reflects a structure arrived at over 50 years ago. Despite a continuously changing strategic and tactical environment ranging from the threat of high intensity war involving the use of nuclear weapons to low intensity conflict involving non-lethal weapons, the Canadian brigade group model which has focussed on infantry led operations has remained virtually unchanged.

2.1.1 The Impact of the Post World War 2 Period

The creation of the modern Canadian Army and its brigade group structure can be traced back to the end of World War 2. Historian Sean Maloney has noted that, Canada’s experience with the 1st Canada -United States Special Service Force during World War 2 led to acknowledgment of the usefulness of self-sufficient formations smaller in size than divisions, which until then had been the standard formation that possessed all the necessary functions required to operate at the tactical level.⁸⁴ At its peak strength in March 1944, the Canadian Army had 495,804 men and women in its ranks.⁸⁵ As a result of demobilization and the immediate post war strategic environment, Canada had reduced the Army to

⁸³ Lieutenant-General M.K. Jeffery, “Speaking Notes,” *Address to the Conference of Defence Associations*. (Ottawa, Ontario: 22 February 2002): 10.

⁸⁴ Sean M. Maloney, “An Identifiable Cult: The Evolution of Combat Development in the Canadian Army 1946-1965.” *DLSC Report 9905*. (Kingston On: Department of National Defence, August 1999): 10.

⁸⁵ C.P. Stacey, *The Canadian Army 1939-1945 An Official Historical Summary*. (Ottawa, ON: Minister of National Defence, 1948): 308.

approximately brigade size by 1950.⁸⁶ The Army at that time consisted of three infantry battalions; two armour regiments; an artillery regiment (plus an additional battery); an anti-tank battery; an engineer field company; a field ambulance unit and a composite maintenance unit.⁸⁷ Taken as a whole these units contained sufficient general-purpose capability to rebuild the Army if required in the future. They were dispersed to locations throughout Canada.

By the early 1950's, Canada's intention to maintain a united front with her allies led to a series of commitments that entailed a prolonged military presence in Northwest Europe and the Atlantic Ocean, with no clear end state. For the Army which had been searching for a mission since the end of World War 2, NATO and its accompanying demands became the central focus by which personnel would be trained, equipment acquired and doctrine developed.⁸⁸ In fact, "without NATO, it would have been difficult to justify the maintenance of modern conventional armed forces, such as tanks, artillery."⁸⁹

The commitment to NATO combined with experience gained in Korea, demonstrated the utility of brigade group formations; still, the choice of this type of formation had more to do with the fact that Canada could not find and train the manpower required to field formations of divisional size than with specific operational requirements.⁹⁰ Even with these modest brigade size commitments, the small size of the standing regular

⁸⁶ Sean M. Maloney, 11.

⁸⁷ Ibid, 2-3.

⁸⁸ *Chiefs of Defence Government and the Unified Command of the Canadian Armed Forces*, 14.

⁸⁹ Joel J. Sokolsky, "A Seat at the Table," *Canada's Defence: Perspectives on Policy in the Twentieth Century*. Ed. B.D. Hunt and R.G Haycock. (Toronto, On: Copp Clark Pitman Ltd, 1993)

⁹⁰ Sean M. Maloney, 11.

army in Canada determined that the Army struggled to generate sufficient troops to meet the country's new demands.⁹¹ In addition, since Canada planned to retain the bulk of its troop capability in North America, the lack of strategic lift capability would continue to have a serious impact on its ability to project force to Europe.⁹²

2.1.2 Force Structure 1950-2000

The layout and tasks for the standard Canadian brigade group has changed little since the early 1950's. Indeed, between 1950 and 2000 despite dramatic changes in the world strategic balance and a wide variance in the expectations of the type of environment Canadian Army planners envisaged the brigade group to operate in, an infantry heavy all

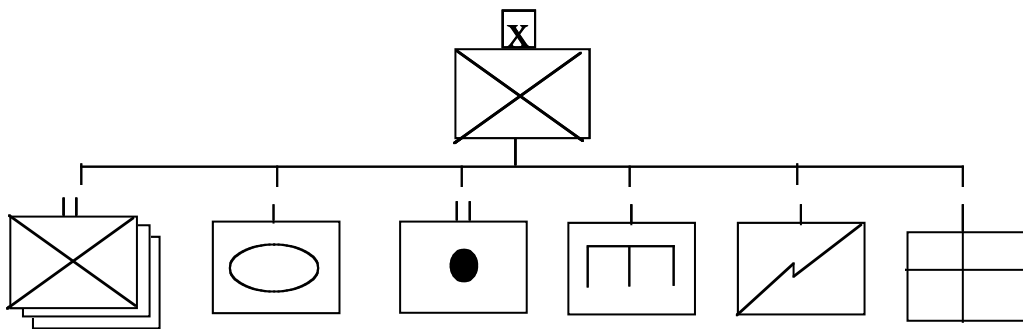


Figure 7. The Canadian Army Special Force – Korea 1950.

Reproduced from information in: Canada. *Canada's Army in Korea: A Short Official Account*. (Ottawa Ontario: Queen's Printer, 1956), 4-5.

arms grouping has been maintained. Figures 7, 8, and 9 illustrate the continuity of the brigade group model throughout the decades. Annex A provides a breakdown of respective military map symbols relevant to all models depicted in this paper. The predominant arm represented remained the infantry in each model.

⁹¹ Ibid, 8. Canada's initial commitment to European defence was a division. This was never achieved.

⁹² Ibid, 17. Lack of strategic lift continues to plague the army today in its effort to project capability world-wide.

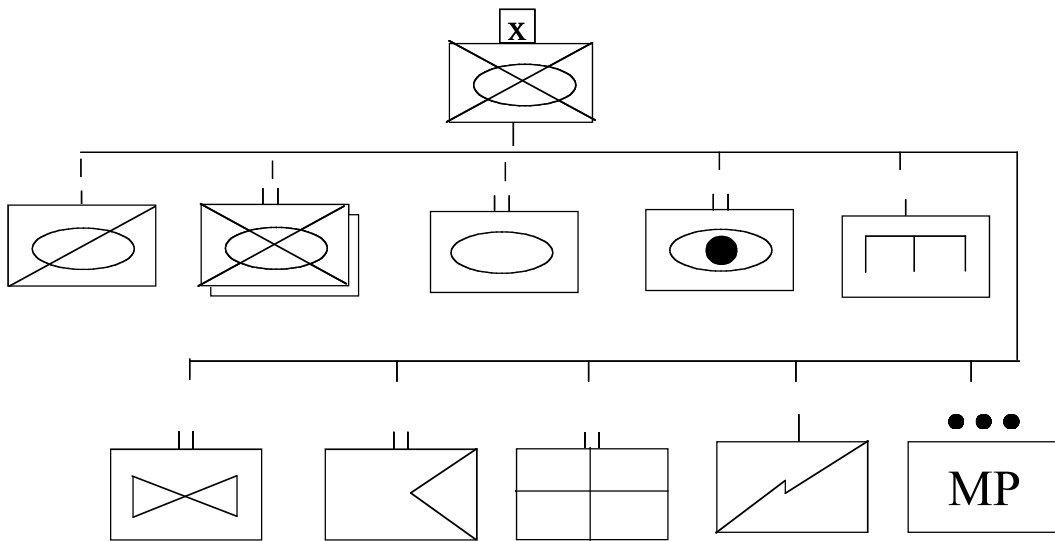


Figure 8. 4 Canadian Mechanized Brigade Group – Germany 1972.

Reproduced from information in: *4 CMBG: Canada's NATO Brigade*. Lahr, FRG: Mortiz Schaunburg GmbH, 1983.

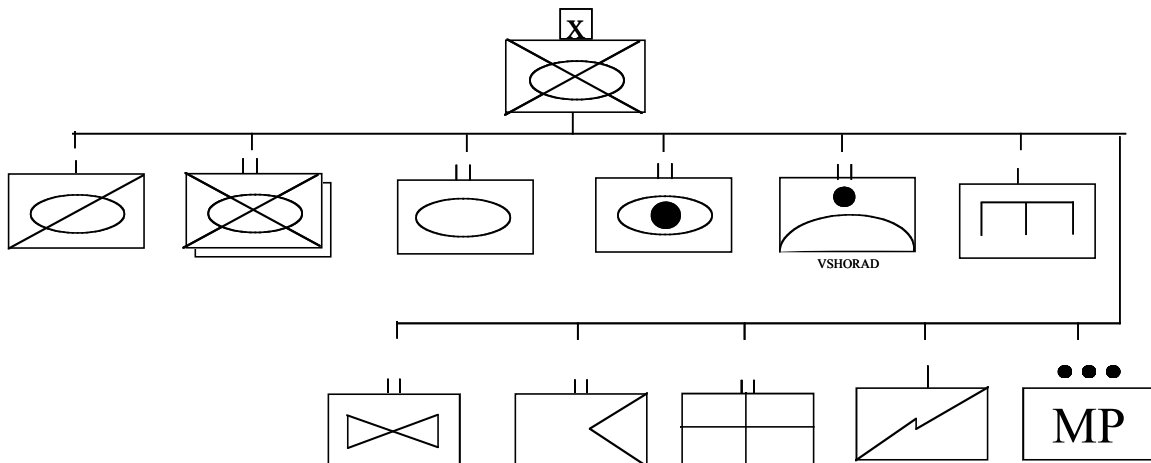


Figure 9. 4 Canadian Mechanized Brigade Group – Germany 1990.

The author served with 4 CMBG from August 1988 to June 1991.

No matter the size of the force Canada would ultimately contribute to collective defence, there appears to have been a general consensus concerning its principle role amongst planners within the Army. Canada's role was to be at the forefront in any conflict demonstrating to allies her intent to shed blood in support of the alliance. Lieutenant-Colonel Mike Cessford addressed that consensus in the Army Doctrine and Training Bulletin, "(i)n a serious conflict Canada will be expected to expend both treasure and

blood.”⁹³ In contrast to the planner view, Joel Sokolosky has determined that Canada’s role in her alliances has been to contribute just enough to retain some interoperability and ensure a voice at ‘allied councils’. The impact on the CF of a major conflict was not the driving force behind any policy decisions made during the Cold War or since.⁹⁴

During the fifty-year time span from re-engagement of the Canadian Army in Europe to today’s combat operations, field units have been expected to operate throughout the Spectrum of Conflict.⁹⁵ Initially operations were envisaged in a nuclear environment, against a numerically superior enemy who possessed comparable technological capability. As the 1980s ended the threat of high intensity combat that had led to the forward deployment to Europe receded. The Army had invested over forty years in developing its combat role in Europe and, “was all but completely focussed on its combat tasks in Europe.”⁹⁶ A special Senate joint sub-committee highlighted the belief that Canada should search for more specific roles that more closely match commitments to existing or emerging capabilities in support of alliance commitments in order to address the commitment/capability shortfall that had existed since 1950.⁹⁷ The decision made in 1994 was to retain the Army’s Cold War structure:

“They [the field forces] will continue to consist of the three field formations currently in Canada. These formations will be similarly structured, to include infantry, armour, field and air defence artillery,

⁹³ Lieutenant-Colonel, Mike Cessford, “Some Thoughts on an Army for the 21st Century,” *Army Doctrine and Training Bulletin*. Vol 1 No.2 Ed Captain John Grodzinski, CD. (November 1998): 31.

⁹⁴ Joel J. Sokolsky, 147.

⁹⁵ Figure 5 depicts the Spectrum of Conflict.

⁹⁶ Joseph T. Jockel, 28.

⁹⁷ Canada, *Report of the Special Joint Committee of the Senate on National Defence: Canada’s Land Forces*. (Ottawa On: Minister of Supplies and Services, 1989): 123.

engineers, communications, medical, military police, intelligence and combat service support units.”⁹⁸

Thus, the army that had been designed and trained to fight an infantry led battle in mixed terrain on the inter-German border was now thrust into what had in the past been a side line occupation - peacekeeping, and peace support. The Army now found itself deploying more frequently, often into operations that occasionally demanded personnel numbers exceeding 4,000 but never resulting in the deployment of a brigade group.⁹⁹ Throughout the Cold War, the Army had considered peace support operations as a distraction from its European strategy.¹⁰⁰ Its primary focus had now altered to supporting almost every type of operation except what it had been training to do for so many years. “Ironically, the Canadian military having been structured, trained and deployed for 40 years to be able to fight the Soviet Union, found itself, once the potential enemy had disappeared, busier than ever overseas as well as at home.”¹⁰¹ The Army has continued to address the new strategic demands utilizing the force structure that had served it so well since 1945-1950.

In summary, Canada emerged from the World War 2 with a formidable army that was promptly reduced to near pre-war size. Despite this rapid and substantial downsizing, the remaining army units attempted to maintain a general-purpose capability for force

⁹⁸ Canada, Department of National Defence. *Canada's Defence Policy*. (Ottawa On: Department of National Defence, April 1992): 25.

⁹⁹ Joseph T. Jockel, 22.

¹⁰⁰ The UN considers peacekeeping to be an operation launched with the concurrence of the warring parties, without the authority to enforcement authority, it includes military personnel and was a reality of the Cold War international situation. Peace support operations include traditional peacekeeping but also operations of increased complexity involving enforcement and not necessarily the support of the warring parties.

¹⁰¹ Joseph T. Jockel, 17.

regeneration albeit at a perilously low level. The emerging threat in Western Europe and the Korean War in the early 1950's, led immediately to the regeneration of an infantry based force structure that subsequently has changed little in the last fifty years. Despite the end of the Cold War and the rise in importance of peace support operations to Canadian foreign policy, the Cold War Army structure continues to be maintained. The absence of a substantial intellectual change in the Army's vision of its future is most effectively highlighted through an analysis of the combat development process. Through the use of current and emerging doctrinal concepts, combat development is tasked to identify, to the Commander of the Army, future structures and roles that the Army needs to achieve with current and emerging weapon systems in order to remain relevant. To date, it has singularly failed to do so.

2.2 Army Combat Development

“We must strive to look beyond the constraints of current organization, technology and doctrine.”¹⁰²

Lieutenant-General M. K. Jeffery, January 2001

The Army has found itself at the beginning of the 21st century with a force structure based upon a strategy designed in the 1950's for the Cold War on the central European front. At the same time the 2001 Departmental Strategic Assessment continued a decade long assessment confirming that the likelihood of a major conflict in the foreseeable future was lower than at any time since 1850. In short, the possibility of global conflict of the scale seen during World Wars 1 and 2 is negligible.¹⁰³ From the Department's point of view the need to maintain, “heavy mechanized formations abroad” or the resources

¹⁰² Lieutenant-General M.K. Jeffery, “Command Forward,” *Future Army Capabilities*. (Ottawa, Ontario: Department of National Defence, January 2001): Forward.

¹⁰³ Canada, Department of National Defence, “Strategic Assessment 2001,” *D Strat A Project Report 2001/17*. (Ottawa On: Directorate of Strategic Analysis Policy Planning Division, September 2001): 158.

required to deploy them overseas in a timely manner has become unnecessary.¹⁰⁴ Armed with this assessment, in 1999 the Department tasked the Army to develop formations that were affordable, modern, and globally deployable.¹⁰⁵ This was further articulated in DPG 2001, which directed the Army to, “(f)ield a viable and affordable force structure trained and equipped to generate advanced combat capabilities that target leading-edge doctrine and technologies relevant to the battle space of the 21st century.”¹⁰⁶

2.2.1 The Evolving Army

To address this growing requirement, the Army embarked on a transformation programme to re-examine all aspects of its operations in order to retain its relevance, and in addition, become affordable and sustainable.¹⁰⁷ The Army designed a model based upon the three-horizon concept.¹⁰⁸ The aim of the model has been to stabilize Army activities today; develop a blue print for the proposed Army of Tomorrow in 5 to 10 years, based upon authorized plans; and finally develop a conceptual model for the Army of the Future that will establish, “a future focus for force development and combat development activities.”¹⁰⁹ For the purposes of this analysis it is the force employment concepts of the

¹⁰⁴ “The Canadian Forces More Capable In An Unpredictable World,” <http://www.cda-cdai.ca/english-frame.htm>, 5 of 7.

¹⁰⁵ Canada, Department of National Defence. *Defence Planning Guidance 2000*. 10 December 1999 [government on-line]; available from http://www.vcds.dnd.ca/dgsp/dpg/Dpg2000/intro_e.asp; Internet; accessed 03 March 2002. Chapter 3, 4/36

¹⁰⁶ *Defence Planning Guidance 2001*, http://www.vcds.dnd.ca/dgsp/dpg/dpg2001/chap2_e.asp#202; 2-7.

¹⁰⁷ Canada. Land Staff Headquarters, *The Army Strategy: Interim Edition*. (Ottawa, Ontario: Department of National Defence, 2001), 5 and Pugliese, David. “Interview: Lt. Gen. Mike Jeffery,” *Defense News*. 4-10 February, 2002. 22. LGen Jeffery confirmed that the Army deficit is greater than \$200 million within an overall budget of \$1.9 billion.

¹⁰⁸ Canada. Land Staff Headquarters, *The Army Strategic Planning Process*.(Ottawa, On: Land Staff Headquarters, March 2000), 23.

¹⁰⁹ *The Army Strategy: Interim Edition*, 4-5.

Army of Tomorrow and the Future Army that provide the most useful indicators of the direction of thinking within the Army establishment of today.¹¹⁰

2.2.2 The Army of Tomorrow

The Army of Tomorrow seeks to develop force structure and force employment concepts that will provide a bridge between the realities of the Army of Today with the potential of the Future Army. In its most recent supplementary planning direction for the Army of Tomorrow, the Army has outlined an operational concept that presumes the CF will continue to utilize forces generated by the Army that are task tailored to the situation in which they will be employed. This concept accepts that while the Army will be capable of participating in all operations across the Spectrum of Conflict, they will not be capable of conducting all associated tasks involved within these respective operations. For example, since the Army no longer possesses heavy armour (tank), it will not seek to conduct tasks that require heavy armour. Similarly, at the tactical level the concept foresees the maintenance of key functions at the formation and unit level that would permit the attachment of additional units or equipment required for any given mission. These key functions are held somewhere within the Army order of battle and could, as required, “draw on the complementary and supplementary capabilities of the Reserves.”¹¹¹ Recent initiatives within the Army direct the grouping of all indirect fire assets within the Artillery Corps. Thus, if an infantry unit is deployed on operations requiring indirect fire, it is

¹¹⁰ The Army of Today is the currently resourced and manned Army; the Army of Tomorrow is the Army that will exist in 5 to 10 years in accordance with ongoing planning and project forecasts; finally, the Future Army is purely conceptual and is designed to provide indicators of trends and risks in 11 to 20 years that the Army of Tomorrow can be designed to mitigate.

¹¹¹ Canada. Land Staff Headquarters, *Supplementary Staff Planning Directive 011C/99 Designing the Army of Tomorrow Army Transformation Working Group (ATWG)*. (Ottawa, On: Director Land Strategic Plans, January 2002): 3.

capable of integrating an artillery indirect fire unit into its organization for the duration of the operation. From a budgetary viewpoint it is interesting that planning guidance for the Army of Tomorrow, “assumes no change in the overall Army manning level and no change in numbers of formations and units.”¹¹² This would imply a force structure that is more costly than the present structure, since it assumes no change in personnel and organization while accepting that modernization has a price.

In the Army of Tomorrow concept, the possibility of a brigade group deployment continues to be identified as the most challenging, albeit, least likely Army task within the Departments Force Planning Scenario’s. The structure of the brigade group circa 2006 with the main units and sub-units is shown below. This model retains the general-purpose structure similar to that of the brigades deployed to Germany and Korea in the early 1950s. The equipping of this brigade group will include a mixed fleet including state of the art light armour vehicles such as the Coyote Armour Reconnaissance vehicle and the Light Armour Vehicle 3 (LAV 3), and 1960’s technologies typified by M109 self propelled artillery and the Leopard 1 tank.¹¹³

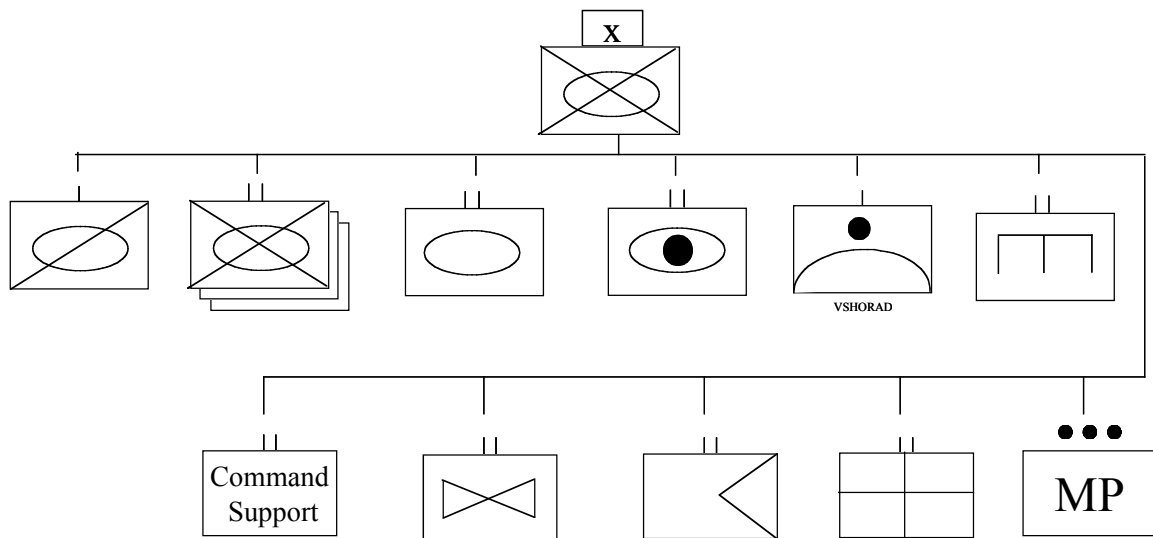
To test its capabilities, the 2006 brigade model was subjected to an intensive operational research study in 2001-2002 under the title BRONZE ZIZKA.¹¹⁴ This study is

¹¹² Ibid, 3.

¹¹³ These eight wheeled armour vehicles are designed and build by General Motors Defence Division, London Ontario. The Coyote employs a mix of surveillance and target acquisition sensors optimized for the detection of armour formations in opened and mixed terrain; the Light Armour Vehicle 3 (LAV 3) is an infantry troop carrier with enhanced defensive capabilities. The United States Army has chosen the LAV 3 as it’s interim armour vehicle. The retention of the M109 and Leopard 1 reflect budget constraints and a lack of light armour technology that can outperform these weapons systems.

¹¹⁴ Canada Department of National Defence, *Project Directive Main Contingency Force Brigade Group Study*. (Ottawa Ontario: Directorate Operational Research (Joint), July 2001): 1. “The aim of BRONZE ZIZKA is to assess the combat capabilities along with the strengths and weaknesses of the MCF brigade group within Force Planning Scenario 11.”

one in a series of operational research studies undertaken as each new piece of equipment or doctrinal development is about to be introduced into service. It is worthwhile to review some of the findings of the previous operational research studies conducted in the late



1990s.

Figure 10. Main Contingency Force Brigade Group – 2006.

Reproduced courtesy of Directorate Land Strategic Plans 3, June 2001.

In 1999 the Operational Research division of the Directorate of Operational Research (Joint and Land) evaluated the capabilities of the LAV 3 during a research study entitled IRON RENAISSANCE. This Army sponsored study examined the vehicle within an infantry company in a war-fighting role. It found that the LAV 3 did not have sufficient armour protection to manoeuvre in the vicinity of a competent adversary. The study also found that the wheel-based platform had manoeuvre difficulty in likely battlefield situations. Finally, the report noted that the principal ammunition type fired by the 25-

millimetre turret weapon, the sabot round posed, “a risk to dismounted soldiers deployed in close proximity.”¹¹⁵

In 2000, a similar study was conducted to measure the effectiveness of the Coyote Armour Reconnaissance vehicle during the BRONZE PIKE study. The study found that the Coyote suffered from similar deficiencies noted in the Light Armour Vehicle 3, but when combined with light reconnaissance and future armour combat vehicles as part of a multi-tiered reconnaissance organization its performance clearly improved.¹¹⁶

What is important to note about each of these studies is the scenario in which each of these Army formations, units and respective equipment have been studied. In every case the scenario in which units were engaged has been typified by a Cold War high attrition battle. For example, the IRON RENAISSANCE LAV 3 trial was centred on both defensive and offensive scenarios. In the study, a Canadian brigade group either defended against a “Red motor rifle division” or while on the offensive, advanced against a withdrawing enemy and in doing so the Canadian Brigade Group conducted a series of company group attacks on “Red outposts/strongpoints.”¹¹⁷ Likewise, during the BRONZE PIKE study, the Coyote equipped reconnaissance squadron employed within a brigade group defending or conducting offensive operations against a similar set of Cold War styled adversaries.¹¹⁸ Each scenario uses an enemy order of battle in keeping with the equipment and tactics employed during the 1970’s and 1980’s by the Warsaw Pact.

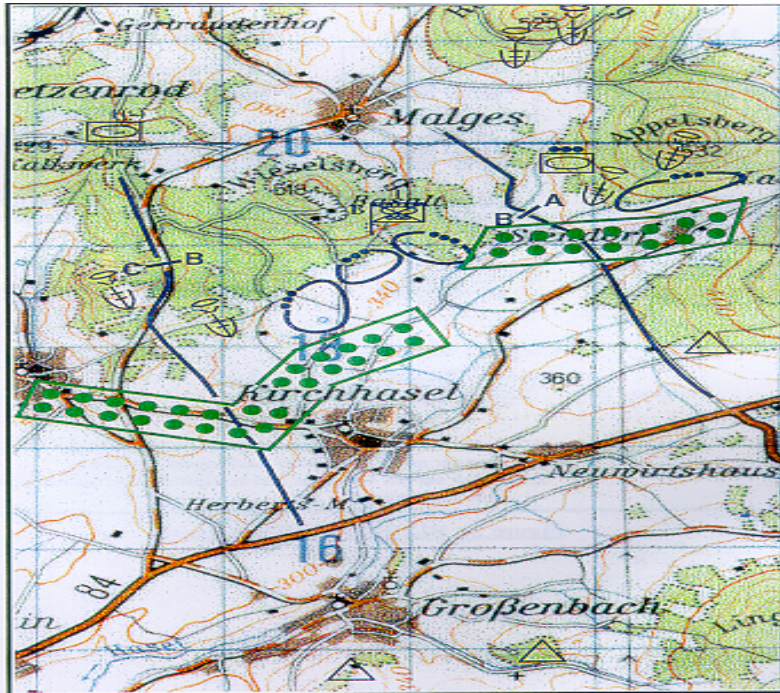
¹¹⁵ M.K. Ormrod, PRS Bender and Maj. DT Davison. “Iron Renaissance,” *Evaluation of the LAV III Combat Team in Conventional Operations*. (Ottawa, On: Operational Research Division, Department of National Defence, March 1999): iii.

¹¹⁶ Major R.J. Round and Mr. FWP Cameron. “Bronze Pike,” *LAV Recce Vehicle (Coyote) Study*. (Ottawa, On: Operational Research Division, Department of National Defence, December 2000): 78.

¹¹⁷ M.K. Ormrod, 8.

¹¹⁸ Major R.J. Round, 7-8.

The dominance of battle against an adversary equipped and organized in this manner was given an additional Cold War context by the terrain chosen for each study. With the exception of BRONZE ZIZKA which has utilized Departmentally sanctioned Force Planning Scenarios, operational studies undertaken by the Army have focussed



principally on conflict in the Central European region.

Figure 11. Canadian LAV 3 Company Deployment.

This map reproduced from IRON RENAISSANCE, depicts an infantry company in a linear defence protected by minefields and supported by tanks. It is situated in Germany. Reproduced from Ormrod, M.K. PRS Bender and Maj. DT Davison. "Iron Renaissance," *Evaluation of the LAV III Combat Team in Conventional Operations*. (Ottawa, On: Operational Research Division, Department of National Defence, March 1999): 14.

Figure 11 illustrates a typical terrain model chosen for operational research by the Operational Research Division. In this case, the IRON RENAISSANCE study used the terrain of Northern Germany with adversary forces advancing from east to west. While there are likely funding limitations within the Department's Operational Research Division

that could limit the availability of other digital terrain mapping of suitable quality for these studies, it is telling by the map depictions in each of the written reports cited here, that the location of the conflict area is clearly described as being Northwest Europe. Unfortunately, similar difficulties face future army planners as they seek to develop concepts and ideas for 2020.

2.2.3 The Future Army

Future Army development has clearly embraced the information age as the future of military power as outlined in Alvin and Heidi Tofflers' book, *War and Anti-War*.¹¹⁹ Army planners in the Directorate of Strategic Concepts envisage the future battle space as one typified by information dominance, it will occur in complex terrain requiring high tempo coalition operations over a wide area. Weaponry will continue to become more precise and autonomous.¹²⁰ Surprisingly however, Future Army planners have also been unable to break the trend of fighting a Warsaw Pact type adversary on the central German Plain. As demonstrated at figures 12 and 13, the Future Army brigade group continues to conduct a high intensity battle, albeit with an information age force, that in combination with superior weapons is able to deliver greater destruction on the enemy from ever-greater ranges.¹²¹ Theoretically, this should permit the reduction of the number of troops required; Future Army planners have not been able to achieve this as yet. The envisaged future brigade group would retain the same number of personnel as a brigade today of roughly 5,000

¹¹⁹ Alvin and Heidi Toffler, *War and Anti-War*. (Toronto, Ontario: Little Brown and Company, 1993): 37. The Tofflers' describe three waves of civilization each with a corresponding influence on military affairs. From one through three: The agrarian wave, the industrial wave and finally the information wave.

¹²⁰ Canada. Department of National Defence, "DLSC Report 01/01," *Future Army Capabilities Requirements*. (Ottawa, Ontario: Directorate Land Strategic Concepts, January 2001): 7.

¹²¹ Tofflers' anti-war point comes from the fact that information has allowed relatively small numbers of people to exact a significantly greater amount of war damage.

troops, but would be capable of overcoming a 7:1 numerical disadvantage in battle.¹²² This compares with the Cold War standard of accepting battle with no more than a 3:1 numerical disadvantage. The tension between people, capital and O&M in internal departmental budget balancing remains to be addressed in the Future Army Concept.



Figure 12. Future Army Adversary Weapon Systems.

The adversary systems depicted here are a Havoc attack helicopter and a T-72 main battle tank, both of which are Russian built and are typical of the systems Canada prepared to face during the Cold War. Reproduced from Canada. The Department of National Defence. *Future Army Experiment Operations in the Extended Battlefield*. (Kingston, Ontario: Directorate of Land Strategic Concepts, June 2001): 4.

Thus throughout the combat development process within the Army today, there is a pervasive reliance on the experience of the Cold War. Lieutenant-General M. Jeffery, Chief of the Land Staff, identified in early 2002, three broad situational areas for conducting operations that he foresees Canadian Army participation. These areas are centred on, peace support, complex and open terrain operations. Notably, he considers operations in complex terrain as the likely developmental focus for the Army. “This would see units and Brigades, with greater ISTAR and Command and Control and able to change organization construct quickly to meet the demands of complex terrain operations, but still able to adapt to the other operations.”¹²³ Lieutenant-General Jeffery is clear in the direction he wishes to take, however, this will entail a dramatic shift in thinking within the Army

¹²² Canada. Department of National Defence, *Future Army Experiment Operations in the Extended Battlefield*. (Kingston, Ontario: Directorate of Land Strategic Concepts, June 2001): 4.

¹²³ *Address to the Conference of Defence Associations*, 10. ISTAR - Intelligence, Surveillance Target Acquisition, Reconnaissance. This represents the Army’s intent to maximize information availability on the battlefield.

combat development community away from the traditional Cold War focus. The most important studies, recently completed and described above, fix the Army in an open terrain

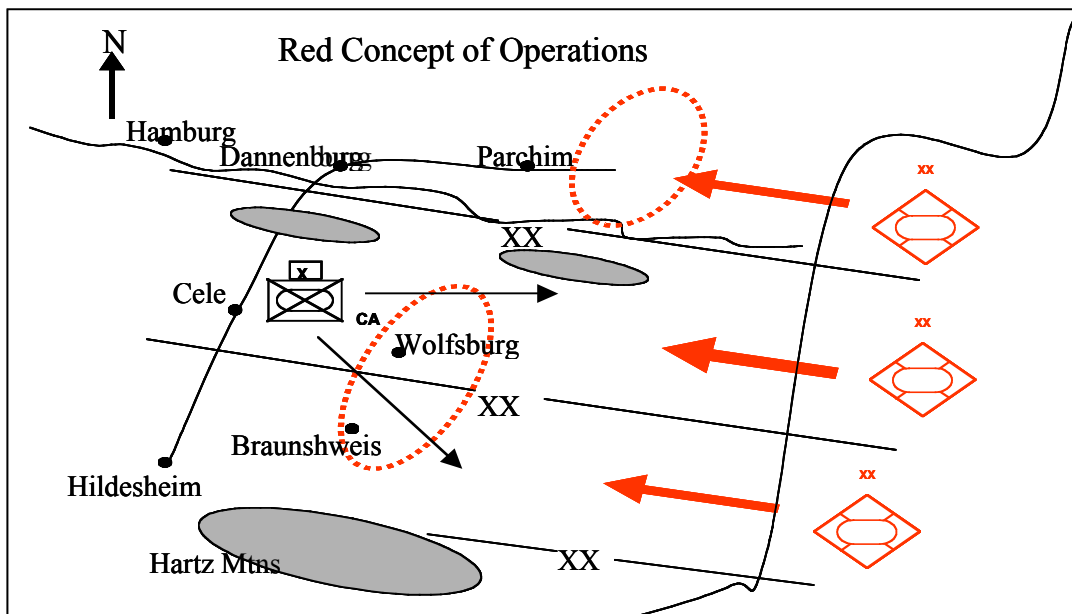


Figure 13. Future Army Red Scenario and Concept of Operations.

This map depicts Red motor rifle divisions advancing from the east towards the German city of Hamburg. A Canadian brigade group is conducting a mobile defence east of the town of Cele. Reproduced from Canada. The Department of National Defence. *Future Army Experiment Operations in the Extended Battlefield*. (Kingston, Ontario: Directorate of Land Strategic Concepts, June 2001): 4.

battle against a Cold War legacy adversary equipped with heavy armour and mechanized formations.

2.2.4 The United States Interim Brigade Combat Team

In opposition to the Canadian Army's course of action, Canada's principal ally, the United States of America is equipping up to six Interim Brigade Combat Teams with equipment equivalent to that being fielded by the Canadian Army, with the intention of producing a force, "designed and optimized primarily for employment in small scale contingencies (SSC) in complex and urban terrain, confronting low-end and mid-range threats that may

employ both conventional and asymmetric capabilities.”¹²⁴ There is a lack of accessible operational research concerning the Interim Brigade Combat Teams concept, however what is clear is that the United States has no intention of designing these forces for use in a Cold War type scenario. The United States will retain legacy systems such as the M1A2 main battle tank and the M2 Bradley infantry-fighting vehicle as the solution to any future Cold War type scenario.

The Department of National Defence has attached great importance to the acquisition of the Coyote and LAV 3 armour vehicles. The Department expects these vehicles to effectively equip the Army to meet expectations for being particularly well suited to the entire range of peace support operations, as demonstrated by the recent operation in Ethiopia and Eritrea.¹²⁵ In the future, through the provision of improved mobility, armour protection and enhanced firepower, these modern vehicles are expected to permit the Army to form strategically deployable, mission tailored forces. Additionally, the Chief of the Land Staff has assessed the most likely and challenging operations before the Army in the future will be those conducted in complex terrain, such as those being planned for by the United States Army Interim Brigade Combat Teams.

Despite these assessments, the combat development process within the Canadian Army has pursued the development of a general-purpose brigade group structure designed to fight a high intensity battle in open terrain. The Army is being re-equipped by the Department to focus on the perceived future security environment yet up to now has

¹²⁴ United States Army, *The Interim Brigade Combat Team Organizational and Operational Concept*. 30 Jun 2000 [US Army on-line]; available from <http://www.lewis.army.mil/transformation/O&O%20brief/>; Internet; accessed on 4 March 2002.

¹²⁵ “The Canadian Forces More Capable In An Unpredictable World,” <http://www.cdacda.ca/english-frame.htm>, 7.

focused its intellectual energy into devising a means to use this equipment to continue the fight against the former Cold War threat. Whether the Army, which is being equipped to counter more asymmetric threats can continue with its traditional desire to evolve into a force capable of the high intensity fight, is questionable. It has been engaged as the force of choice for the government for nearly every possible task except those that require combat operations involving a mechanized brigade group. Simply managing the challenges of today, all within the current and projected resource envelope is a daunting task. While these issues have been clearly recognised by the Commander of the Army, it remains to be seen whether the Army is willing to confront them. Meanwhile, the Army continues to address operational tempo with a Cold War structure and doctrine that is unsustainable, a situation that shows no immediate sign of being resolved.

2.3 Army Sustainability

“Technological advances will provide challenges internally due to the requirement to effectively allocate scarce resources to maximize the benefits of new technologies. It is unlikely that all potential advances will be affordable therefore key decisions will have to be made within this rapidly changing environment.”¹²⁶

Col S.A. Hug, 2000

The Army faces a budget shortfall in excess of \$200 million a year. In order to alleviate this burden it is seeking to alter its structure to reduce the overall demand on resources.¹²⁷ Lieutenant-General Jeffery noted in a memorandum to the Chief of the Defence Staff and the Deputy Minister of National Defence in November 2001 that within the current authorized resource levels the Army is unsustainable and decisive action is required. Not only has he assessed that the Army is hard pressed to maintain the mandated

¹²⁶ Col S.A. Hug, http://www.vcds.dnd.ca/dgsp/analysis/challenge_e.asp.

¹²⁷ David Pugliese, 22

tasks given in the 1994 White Paper but he also concluded that there is little remaining flexibility to respond to unforeseen events. Lieutenant-General Jeffery highlighted specific areas at risk, the most significant of which were: an overextended training system; a list of tasks greater than available resources; and the cost of modernization.¹²⁸ This section on Army sustainability will focus on these three issues. It notes that the Army in its current structure is encountering great difficulty in meeting the current operational tempo, is unable to maintain an adequate level of training, and is not able to modernize sufficiently to assure interoperability with the United States.

Senior leadership within the Department has recognized the high number of missions conducted by the CF since the end of the Cold War. It also is aware that the majority of these operations have been borne by the Army. As former Vice Chief of the Defence Staff, Vice-Admiral Garnett stated in June 2001, the CF has, “executed more operations in the last decade than in the previous thirty-five years”¹²⁹ The number of operations conducted under the rubric of ‘peace support’ has had a substantial impact on the ability of the Army to continue to train war-fighting forces at the battle group and company/squadron level. Significantly, the only Army troops currently receiving any training above company level are those about to embark on peace support type missions. The situation has become serious enough to be noted in the 2001 report by the Auditor-General of Canada calling attention to, “less-than-optimal levels of training and a decline in combat arms and war-fighting skills throughout the Army.”¹³⁰

¹²⁸ Lieutenant-General M.K. Jeffery, *Land Force Command Business Submission*. Memorandum 7000-1 DLSP 4 (2 November 2001): 1-3.

¹²⁹ “The Canadian Forces More Capable In An Unpredictable World,” <http://www.cdac-dai.ca/english-frame.htm>, 5.

¹³⁰ Office of the Auditor General of Canada, <http://www.oag-bvg.gc.ca>.

2.3.1 Army Training and Operational Readiness Framework

The absence of a suitable level of training across the Army has led to the development of a training and readiness cycle called the Army Training and Operational Readiness Framework (ATOF). “ATOF will move forward as a means of achieving ‘managed readiness’ – one of the Army’s strategic objectives.”¹³¹ Currently, units returning from operational commitments immediately commence high-readiness training, which seldom reaches beyond sub-unit level before they are called upon to deploy again. ATOF as a system operates on a three-year cycle. Year one sees a unit at high readiness, which potentially includes an operational deployment. A unit in year two is at low readiness where postings, individual training and support to other training occur. Units during year two are on a low priority for personnel replacements. Finally, in year three, units receive replacement personnel and beginning at low level training culminates in a unit level operational readiness declaration that begins the cycle once again. ATOF has the potential to provide the Army with the means to re-institute higher level collective training. It depends, however, on a degree of predictability in operational rotations for a fixed number of units in order to ensure a programmed training and operations cycle. Without predictability in operational rotations the Army remains unable to move beyond the crisis mode of selecting units for deployments because they have been in Canada the longest, rather than because they have reached a predetermined level of training proficiency. For the Army, units on operations are usually based upon an infantry battalion or an armour regiment’s headquarters. These units are often referred to as manoeuvre units. In order to sustain up to two manoeuvre units on operations indefinitely requires a

¹³¹ Canada, Chief of the Land Staff. *Record of Decision – Army Council*. (23-23 May 01): 2.

minimum of 12 units undertaking a six month operational tour in every three year cycle. An Army sustainability exercise (ASX) conducted in April 2001 demonstrated that within the current budget envelope the Army could sustain a total of 8 manoeuvre units.¹³² Furthermore, in its effort to maintain the geographically dispersed components required to field the MCF Brigade group the Army continues to expend resources on six regular force Armour and Artillery units despite the fact that only one of each type is called for in the 1994 White Paper on Defence. In order to maintain combined arms skills across Canada and to address the requirement for a rotation base for continuous overseas operations, the Army has chosen to retain three regular force units of each. Even with 12 available manoeuvre units, ATOF is prone to failure should the government determine that additional units should embark on unscheduled operations as it has done frequently in the past decade.¹³³

2.3.2 The Task/Resource Crisis

The growing task/resource crisis faced by the Army emerges from the combination of a declining resource base, both in human and material resources, concurrent with a high tempo of operations and modernization. In short, resource availability is in decline while there has been a steady increase in operational commitments at the same time that the impact of modernization is being realized. To sustain operations today requires borrowing from the budget allocations for the annual maintenance of physical infrastructure, delaying arrival dates of capital programmes, and cancelling war-fighting training. This crisis, not surprisingly, extends to individual soldiers. Lieutenant-General Jeffery noted that in the

¹³² ASX information available only through DND intranet.

¹³³ The deployments of Army troops to Kosovo and East Timor in 1999, to Macedonia in 2001 and to Afghanistan in 2002 were not forecasted.

summer of 2001, “a crisis situation was reached, when the demands of operational deployments, the augmentation to the training system, and other national tasks exceeded the availability of personnel to respond.”¹³⁴ This resulted in cancelled and scaled back training plans, exacerbating problems related to Army frustration regarding inadequate training levels.

Modernization also aggravates the resource and task challenge. For the Army, re-equipping requires taking units out of the line to retire equipment, bringing in and testing new equipment and then conducting training to ensure units are proficient with what is certain to be more complex technology.¹³⁵ Finally, modernization is an increasingly expensive endeavour that forces armies to make fundamental decisions with regard to force structure.

“Unlike the Cold War, in today’s environment more is not necessarily better, because fewer technologically enabled and digitized forces can defeat larger but less technologically advanced forces. Human capital requirements are also changing, and all militaries are moving towards small but highly trained teams of professional technical and tactical experts.”¹³⁶

The Canadian Army is caught in this conundrum. It requires personnel for the volume and nature of tasks it must perform on a day-to-day basis. Those same personnel might not however represent the skill types required in a modernized force. “There is an ongoing intellectual debate, both internal and external to the Department, on how best to balance our future force structure needs with policy demands and current commitments.”¹³⁷

¹³⁴ *Land Force Command Business Submission*, 2.

¹³⁵ *Address to the Conference of Defence Associations*

¹³⁶ “The Canadian Forces More Capable In An Unpredictable World,” <http://www.cda-cdai.ca/english-frame.htm>, 5.

¹³⁷ *Ibid*, 5.

The challenge remains to incrementally change the force; all the while maintaining the skills required for the operations of today and, at a designated moment, switch to tasks that reflect the skills of the digital, technologically advanced force. The United States Army has chosen to modernize selected units and formations under the Interim Brigade Combat Team concept discussed earlier. The remainder of the United States Army, known as the 'Legacy Force', is deemed robust enough to await future technical innovations and carry the burden of current operational deployments. Legacy and Interim forces will merge into the 'Objective' force in 10 to 20 years. The Objective force will comprise a combination of the best results of the interim forces combined with the remaining high value aspects of the legacy force. The Canadian Army is not organized nor has it sufficient numbers of personnel to be able to separate and dedicate a portion of its deployable force to focus on the challenges of transformation. In addition, the equipment coming into service is prioritized for immediate use on operations to replace equipment dating from the 1960's and 1970's.¹³⁸ Therefore, the very units that require modernization are the same units that are subject to high operational demand.

Modernization is further complicated by the Department's intent to remain interoperable with the United States of America. In the period 1995 through 1997 the United States military invested US \$35.5 billion per year into research and development. That figure equalled about the same amount as all the remaining NATO allies invested in military equipment spending.¹³⁹ For example, the Department's budget goal of 23%

¹³⁸ The Coyote Reconnaissance Vehicle was designed to replace the Lynx and Cougar series of armour vehicles (in service 1968 and 1979 respectively) and the LAV 3 was designed to replace the Grizzly (entry into service 1979).

¹³⁹ Brian MacDonald, 34.

dedicated to annual capital expenditures amounts to CA \$2.76 Billion or US \$1.242 Billion based on an exchange rate of 45%. For Canada, as well as the remainder of the NATO allies, the staggering amount of resources being devoted to research and development by the United States is a useful indicator of the potential cost of interoperability.¹⁴⁰

Modernization including interoperability with the United States may only be achieved at the expense of ongoing operations and training.

The Army is in crisis. It is encumbered with a force structure over 50 years old and a combat development process determined to conduct operations with a design appropriate to the Cold War. Army doctrine remains wedded to supporting an infantry-centric open terrain battle and continues to seek the means to adapt new technologies to fight that fight. The ability of the Army in large part to train at battle group and brigade levels has already suffered from resource constraints and operational tempo.

Whether the Canadian Army can maintain its current range of operations; improve a dire training situation and modernize to ensure interoperability with the United States, all within a declining resource base, is unlikely. The Army's desire to invest resources in order to maintain the ability to deploy a combined arms brigade group within a collective defence scenario jeopardises its ability to modernize effectively. Risk acceptance and a vision for the future will permit decisions as to what operations the Army should be committed to, and what types of training are essential to execute those missions. These are all key factors that must be considered if the Army wishes to remain relevant in the future.

¹⁴⁰ Ibid, 34.

PART THREE: THE GAP

“The end of the Cold War meant that the Department's strategic goals had to be revised. The perceived reduction in threat has meant that the rationale for existing force structure and equipment plans has been called into question and must be rethought. It also meant considerable organizational and personnel changes as Canadian Forces Europe was closed down and personnel returned to Canada and integrated into units stationed at home.”¹⁴¹

Peter Kasurak and Nicholas Swales, 1998

The strategy of the Department of National Defence since 1994 has demanded that the Army, within the structure of the CF, become capable of adapting to a future oriented defence structure within a changing strategic environment. The Prime Minister and the Minister of National Defence have through statements and actions demonstrated two principal viewpoints concerning defence. Firstly, defence will be governed by fiscal policy rather than strategic and operational needs. Secondly, and perversely, defence forces will continue to be used world wide as a tool of Canadian Policy. Within these two constraints the government and the Department expects the CF and the Army to modernize and adapt to the evolving strategic environment in order to ensure continued usefulness and relevancy.

The Department and the CF have also articulated an intent that will ensure the Army reflects both the strengths and realities of Canadian Society. This implies developing an Army within a reduced manpower envelope, organized into a highly technological, information/knowledge-centric force with effective mobility at the strategic level to contribute to worldwide operations conducted within a multilateral framework.

¹⁴¹ Peter Kasurak and Nicholas Swales, “Reforming the Department of National Defence,” *Canadian Defence Quarterly*. Spring 1998 [journal on-line]; available from <http://proquest.umi.com>; Internet; accessed 13 January 2002.

Finally, the requirement for interoperability within an American led coalition structure has given clear indication to the Army to modernize in a direction that will ensure continued relevance with Canada's principal ally.

The Army meanwhile has continued to develop a force employment model with direct linkages through the Cold War back to the end of World War II. It is from this model that the Army generates resources for ongoing peace support and war fighting operations. Due to the basic design of this force employment model, the Army remains committed to the mechanized infantry close battle. Acceptance of technological innovation within the field force is related primarily to how operations centred on high intensity combat in Western European type terrain can be more effectively supported and conducted. The attrition type of warfare that a major European war would entail has traditionally required large numbers of personnel capable of operating independently in a high threat environment. This situation is not addressed by current nor forecasted Army equipment capabilities and is not supported by Departmental and CF policy. Combat development work within the Army has not proven able to alter this trend. Future Army development has continued to emphasize brigade operations against a Cold War style adversary. However, limited priority has been placed on equipping and manning the Army for high intensity war fighting in favour of maintaining effective forces to support United Nations and multilateral operations.

Fortuitously, the decision of the American Army to acquire an Interim Combat Vehicle based upon the LAV 3 chassis from General Motors Defence, based in London Ontario, provides an excellent interoperability link to the Canadian Army's recently delivered Coyote Reconnaissance Vehicle and the LAV 3. At the same time, the operational concept for the employment of the LAV fleet within the Canadian Army has

been focussed on improving its ability to operate in a Cold War type role as typified by Army sponsored operational research. This concept is at odds with initial expressed American intentions for the employment efforts of LAV equipped Interim Brigade Combat Teams. Interim Brigade Combat Teams are conceptually designed and optimized primarily for employment in small scale contingencies in complex and urban terrain, confronting low-end and mid-range threats that may employ both conventional and asymmetric capabilities.

Personnel pressures are severely taxing the Army. Departmental statistics indicate that consideration is being given to reducing the CF from the current authorized strength of 60,000 to approximately 50,000 personnel in order to provide sufficient budget flexibility.¹⁴² This reduction would permit an increase in capital expenditures to 23 percent. However, the Army has continued to base its planning on stability in personnel numbers both in garrison and on operations.

Overall, the cumulative realities of fiscal pressures, emerging departmental strategy and the latest forecast concerning the future security environment has put the Army on a course to field a Brigade Group, and smaller tactically self-sufficient units that are incapable of achieving the strategic vision articulated by Departmental and CF policy. Comments by Prime Minister Chretien referring to the '1939' type thinking of senior military officers, reflects Government frustration with the inability of the services to develop effective forces within the allocated budget envelope.¹⁴³ In its effort to maintain the brigade group in its present form, the Army is risking its ability to remain relevant. The

¹⁴² See figure 3.

¹⁴³ Joel-Denis Bellevance, "Chretien accuse les militaires d'avoir une vision passeiste de l'armee," *La Presse*. (Montreal, QC: La Presse, 21 Decembre 2001): A-1.

expeditionary brigade group has not been deployed on operations since Korea, and is in danger of being lost because of the expense of maintaining a capability that has not been utilized in 40 years.¹⁴⁴

¹⁴⁴ Joseph, T. Jockel, 4.

CONCLUSION

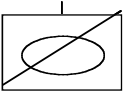

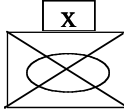
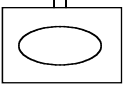
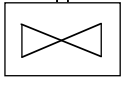
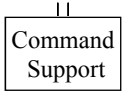
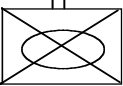
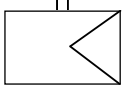
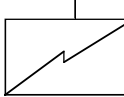
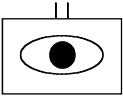
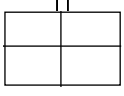
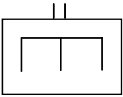

The Army has not been able to effectively demonstrate the ability to adjust to the evolving strategic environment nor has it designed an affordable force structure that can achieve the vision consistently articulated in official policy since 1994. This has led to a gap between the Army's force employment concepts and the emerging CF strategy. The Department's budgetary position has remained relatively consistent in comparison with its NATO allies for the past 40 years. Policy documents from the 1994 White Paper on Defence through to the present have consistently articulated a plan to embrace change while also making clear the requirement for affordability. The Prime Minister and successive Ministers of National Defence have restated the need for capable forces that are cost effective. The Prime Minister in particular, has also publicly expressed frustration at the inability of the Army to achieve this aim.

This paper has analysed the defence budget and policy documents promulgated by and within the Department of National Defence since 1994. By comparing this analysis with the Army's actual progress in moving beyond its Cold War structure, its combat development initiatives and lastly its identified sustainability crisis, a growing gap has clearly emerged.

The Commander of the Army has clearly stated that the Army is unsustainable in its present form. The likelihood of any substantial change in the allocation of resources to the Army, or a reduction in its operational tempo, is low. The most effective tool available to the Army to achieve a convergence with the CF strategy is through a reinvigoration of its combat development system. If the demands of limited personnel availability combined with high tempo and modernization are stretching Army capabilities to the breaking point,

then only a fundamental re-evaluation of the requirement for maintaining existing capabilities will provide a solution. The Army must re-focus to provide modern useful and affordable expeditionary forces that will likely be smaller than the traditional brigade group. The essential measure of success for the Army is its ability to align itself with the CF strategic vision. The Army must re-evaluate its operational focus to ensure utility that will guarantee relevancy and value to the Government of Canada and its allies, principally the United States of America. The Canadian Army of 2001 might not mirror the army of 1939 as the Prime Minister alluded to, but when analysed against the current demands of the Department and the CF, its position today is more akin to the thinking of the post-1945 period rather than 2002.

ANNEX A: MILITARY MAP SYMBOLS

	Armour Reconnaissance Squadron		Air Defence Battery		Brigade Group
	Armour Regiment		Aviation Squadron		Command Support Battalion
	Infantry Battalion		Service Battalion		Signals Squadron
	Artillery Regiment		Field Ambulance		
	Engineer Regiment		Military Police		

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