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THE CANADIAN ARMY RESERVE
IN THE AGE OF TOTAL FORCE:
AN ORGANISATIONAL ANALYSIS
USING A BEHAVIOURAL SCIENCE APPROACH

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Ph.D. Thesis

The City University Business School

Submitted March 1996

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ACKNOWLEDGEMENTS

I wish to thank Colonel R.W. Stanley, Commander of British Columbia District, for allowing me to conduct my research with the soldiers of BC District during the 1994 Soldier Skills Evaluation. I wish to thank the Commanding Officers of the following units for allowing their soldiers to participate in my research: British Columbia Dragoons, British Columbia Regiment, 5 Field (BC) Regiment, 15 Field Regiment, 6 Field Engineer Squadron, 44 Field Engineer Squadron, Rocky Mountain Rangers, Royal Westminster Regiment, Canadian Scottish Regiment, 3rd Battalion Princess Patricia's Canadian Light Infantry, 11 Service Battalion, 12 Service Battalion, 11 Medical Company and 12 Medical Company. I also wish to thank the soldiers and officers of these units who took the time to fill out my surveys.

I wish to thank the British Ministry of Defence and the Washington State National Guard Headquarters for providing much useful information.

I wish to thank BGen Bill Wickett, BGen Stu MacDonald, LCol John Brownlee-Baker, Major Peter Learmonth and Professor Terry Willett for reviewing my work and for providing valuable comments. I also wish to acknowledge Dr. Min Tsao for his assistance with some of the statistical portions of this work.

I especially wish to thank my thesis advisor, Dr. Paul Dobson, who has given me consistently excellent advice throughout my period of study.

CONSULTATION AND COPYING

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DEDICATION

This work is dedicated to the soldiers of the Canadian Army, both Regular and Reserve, who have covered themselves in glory during this nation's wars and toiled in obscurity between them.

ABSTRACT

This thesis explores how the Canadian Army can best use the Regular and Reserve Forces to construct an operationally ready Total Force. The work follows four broad avenues of inquiry.

First, the Canadian historical experience is examined in an attempt to place current defence needs into proper historical perspective. Second, the experiences of units which have implemented various versions of Total Force are considered. Third, empirical research is conducted in an attempt to quantify: 1) The similarities and differences between Regular and Reserve soldiers in terms of readiness; 2) The similarities and differences between Regular and Reserve soldiers in terms of the satisfaction of their individual needs; 3) The effect on the satisfaction of the group needs of Reservists of introducing large numbers of Regular soldiers into Reserve units; 4) The similarities and differences between Regular, Total Force and Reserve units in terms of their ability to achieve the task; 5) The interaction between these various items. Fourth, the practices of other allied Armies are contrasted with Canadian practice in a number of areas which appear to affect the results achieved in a Total Force environment.

Concrete recommendations are offered with regard to the following: command structure; mix of units; size of units; demographics and location of units; the use of Regular Force personnel in Reserve units; the Reserve augmentation of Regular Force units; training schedules; recruitment and enrolment standards; training requirements and promotion policies; pay and benefits; and operational evaluations. Together these recommendations offer a comprehensive programme for the revitalisation of the Canadian Army Reserves.

ABBREVIATIONS

<u>Term</u>	<u>Abbreviation</u>
Active Guard Reserve	AGR
Ace Rapid Reaction Corps	ARRC
Annual Technical Inspection	ATI
Canadian Brigade Group	CBG
Canadian Active Service Force	CASF
Canadian Expeditionary Force	CEF
Canadian Forces Recruiting Centre	CFRC
Commanding Officer	CO
Force Mobile Command	FMC
Gun Position Officer	GPO
Land Forces Atlantic Area	LFAA
Land Forces Command	LFC
Land Forces Central Area	LFCA
Land Forces Eastern Area	LFEA
Land Forces Western Area	LFWA
Militia Individual Training Career Profile	MITCP
Multi-Purpose Range Complex	MPRC
North Atlantic Treaty Organisation	NATO
Non Commissioned Officer	NCO
Princess Patricia's Canadian Light Infantry	PPCLI
Reserve Entry Scheme Officer	RESO
Retirement Savings Plan	RSP
Regular Support Staff	RSS
Special Service Force	SSF
Territorial Army	TA
Total Force Infantry Battalion	TFIB

RANKS IN THE CANADIAN ARMY

<u>Officers</u>	<u>Abbreviation</u>
General	Gen
Lieutenant-General	LGen
Major-General	MGen
Brigadier-General	BGen
Colonel	Col
Lieutenant-Colonel	LCol
Major	Maj
Captain	Capt
Lieutenant	Lt
Second-Lieutenant	2Lt
Officer Cadet	OCdt

<u>Non Commissioned Members</u>	<u>Abbreviation</u>
Chief Warrant Officer	CWO
Master Warrant Officer	MWO
Warrant Officer	WO
Sergeant	Sgt
Master Corporal	MCpl
Corporal	Cpl
Private	Pte

ORGANISATION OF THE CANADIAN ARMY

This brief primer is offered for the benefit of the reader who may not have an extensive military background. In it we will offer a description of the terms used to describe the various units, sub-units and formations in the Canadian Army. It should be noted that the terms used here are broadly consistent with the British usage but differ occasionally from the American usage.

The section is the smallest infantry grouping in the Canadian Army. It consists of approximately 10 soldiers and is led by a Master Corporal or Sergeant. The equivalent of the section in both the artillery and the armour is the detachment

An infantry platoon consists of three sections plus a headquarters element. It consists of approximately 37 soldiers and is commanded by a Lieutenant. The equivalent of the platoon in both the artillery and the armour is the troop.

An infantry company consists of three platoons plus a headquarters element. It consists of approximately 125 soldiers and is commanded by a Major. The equivalent of a company in the artillery is the battery while in the armour it is the squadron.

The unit is the basic building block of the military organisation. Each of the organisations described above are sub-units of a unit. More specifically, a company is a sub-unit, a platoon is a sub-sub-unit and a section is a sub-sub-sub-unit.

An Infantry unit is called a Battalion and consists of four rifle companies plus combat service support and a headquarters. It consist of approximately 928 soldiers and is commanded by a Lieutenant-Colonel. The equivalent of a Battalion in the artillery and armour is a Regiment. However, this is confusing because there is also another connotation to the term Regiment. In this sense a Regiment is like a family of related Battalions.

For example in Canada the Princess Patricia's Canadian Light Infantry is an infantry Regiment which is located in Western Canada. This Regiment has three Battalions although it is not limited to this number. The number of Battalions in a Regiment can be increased or decreased as the need arises. The fact that these Battalions are part of the same Regiment has nothing to do with their command and control. There is, for example, no Regimental commander of an infantry Regiment in any proper sense of the word. The Battalions simply share a common lineage and history and soldiers who begin their career within a certain Regiment will tend to stay within that Regiment. It is to the Battalions, however, that soldiers are sent and it the Battalion commander for whom they work.

Artillery units are called Regiments and also they all belong to the Royal Regiment of Canadian Artillery. The individual Regiments are numbered to differentiate between them. For example, the 15th Field Regiment, RCA is located in Vancouver, BC. Thus, all Canadian gunners belong to the same Regiment in one sense but to different Regiments in another.

Armoured units are called Regiments and these tend to have independent lineage and history similar to infantry Regiments. They too can be expanded so that in wartime, for example, the Royal Canadian Dragoons could be expanded to include the 1st RCD, 2nd RCD and 3rd RCD. At present none of the armour Regiments are so constituted.

Brigades are formations. This means that they are constructed by putting together a number of different units. The number of units a Brigade will contain depends upon the task. That being said, a standard Canadian Mechanised Brigade Group would include three infantry Battalions, one artillery Regiment, one armoured Regiment and a number of other units including an engineer Regiment, a reconnaissance squadron, an anti-armour squadron, a medical Battalion, an air defence battery, a service

Battalion, a Military Police section and an intelligence section. Brigades are commanded by a Brigadier-General.

The reader will likely have remarked that throughout this section the words Battalions and Regiment are capitalised while companies, squadrons and batteries are shown in lower case. This seems to be the convention although I have yet to receive an adequate explanation of why this is so.

Divisions are formations and consist of approximately four Brigades, although the exact number and make up of these Brigades will depend upon the task. Divisions are commanded by a Major-General.

Corps are formations and consist of approximately four Divisions, although the exact number and make up of these Divisions will depend upon the task. Corps are commanded by a Lieutenant-General.

It is hoped that this explanation will assist the reader.

CHAPTER I

INTRODUCTION

1.1 The Background

The sudden and unexpected demise of the Warsaw Pact prompted many Western nations to consider reducing the size of their Armed Forces. Faced with ongoing budgetary problems and the exacerbating effects of a deep recession, Canada acted more decisively in this regard than many of her allies. In 1992, it was announced that the Regular (full time) Army would be reduced in size from 23,500 members to 20,500 within three years.

This reduction in the size of the Regular Force was to be partially offset by an increase in the size of the Reserve (part time) Force. Between 1989 and 1995 the Army Reserve increased in size from approximately 15,000 members to over 20,000.

The impetus behind this diversion of resources from the Regular Force to the Reserve Force was primarily financial. The cost of recruiting, training, housing, feeding and paying a Regular soldier is in excess of \$150,000 per annum while the comparable cost of the average Reserve soldier is approximately \$20,000.

This shift represented a dramatic change from the policies which had been in place at the height of the Cold War. At that time, NATO countries based their preparations on the assumption of a high intensity war in Europe. Such a conflict would have been more violent than anything seen before and victory or defeat decided in a matter of weeks if not days. The defence planners believed that only troops in position or immediately deployable would be of much use in such a

scenario. Reservists, both in Canada and elsewhere, were seen as being of limited value.

The Canadian Army Reserve was relegated to the periphery of national life during much of the long Cold War. It was reduced in size by almost two-thirds. It was given uninspiring operational taskings when it was given any at all. Incomplete mobilisation plans failed to even mention them. Partially because of this marginalisation, Reserve units were deserted by the social and economic elites which had led them until that time. Historic Reserve units, which had previously played prominent roles in their communities, faded to the verge of irrelevance.

The end of the Cold War raised hopes of a 'peace dividend' but these expectations were short lived. The requirement for peacekeepers, in the former Yugoslavia and elsewhere, meant that the overall operational commitments of the Canadian Army remained almost unchanged. Troops were withdrawn from service with NATO in Germany but almost as many were dispatched to various countries for peacekeeping duties. Nevertheless, cutbacks in the Regular Force went ahead as planned. The shortfall was to be masked by a shift toward greater reliance on the Reserve.

The stated intention of the Government of Canada today is that the Regular Force and the Reserve Force will be increasingly integrated and will become but two components of one Total Force. The ultimate goal is an Army which is more operationally effective and yet, at the same time, less expensive.

The implementation of the Total Force concept requires the quasi-merger of two separate and very different organisations. During much of the Cold War, members of the Regular and Reserve Forces had little to do with each other. Most Regular and Reserve soldiers had never served in the other

component and many had little exposure to the other component during their service. The Regular and Reserve Forces had different enrolment requirements and training programmes. They conducted their exercises separately. They were even administered through a completely different command structure. As a result of this relative mutual isolation, and the very different terms of service in each of the two components, the organisational cultures which developed in the Regular and Reserve Forces were quite dissimilar. As these two organisations are increasingly merged, it can be expected that each component will experience many of the unpleasant side effects which normally attend a reorganisation of this magnitude.

This thesis will explore how the Canadian Army can best use the Regular and Reserve Forces to construct an operationally ready Total Force. This work follows four broad avenues of inquiry. First, the Canadian historical experience is examined in an attempt to place current defence needs into proper historical perspective. Second, the experiences of units which have implemented various versions of Total Force are considered. Third, empirical research is conducted in an attempt to quantify the similarities and differences of Regular and Reserve soldiers in terms of readiness and a number of factors which influence readiness. Fourth, the practices of other allied Armies are contrasted with Canadian practice in a number of areas which appear to affect the results achieved in a Total Force environment.

This research is of real practical significance. All Western nations are exploring methods by which they might reduce their military expenditures. Canada is in the forefront of the trend toward relying on the Reserve to provide more of the manpower for her Army. An exploration of the practical feasibility of such an endeavour, and the problems inherent in it, would be a timely and useful contribution. The remainder of this chapter

is devoted to a more detailed outline of this work.

1.2 An Overview of Chapter Two

In chapter two, the current situation of the Canadian Army is placed into historical context. The standard sources, Granatstein (1989, 1989, 1993), Morton (1970, 1989, 1989), Hasek (1987), Melady (1983), Nicholson (1962), Stacey (1966) and Stanley (1960) are reviewed. The focus of this chapter, however, is different from the focus of most of these other works. The emphasis is not on the achievements of Canadians in battle, but rather on the manner in which Canadian soldiers were organised before, during and after. The resulting work provides a unique review of the development of the Canadian Army and in particular the evolving relationship between the Regular and Reserve Forces.

This chapter outlines how Canada has attempted to maintain an adequately trained and equipped Army during various periods in her history. It is intended to challenge the prevailing conceptions about the 'normal' relationship between Regular and Reserve Forces. During more than 40 years of Cold War, it became commonly accepted, both inside the military and out, that reliance on Regular soldiers was and always had been the norm. This chapter is meant primarily to challenge that misconception.

The reader will discover that many of the challenges we face today are not that dissimilar from those that were faced by decision makers in the first half of this century. Again we are faced with an uncertain threat. Again we are faced with the necessity of trying to do more with less money. The reader will be invited to consider whether history does not point the way to some of the solutions for which we are searching.

1.3 An Overview of Chapter Three

A number of initiatives have been undertaken to implement the Total Force concept and thereby to increase the use of Reserve soldiers in the Canadian Army. These can be divided into two categories. The first relates to the creation of Total Force units by integrating Reserve troops into Regular units. These have been dubbed 90/10 units based on the respective proportions of Regular and Reserve troops which make them up. Most of the 'Regular' units which have undertaken UN peacekeeping missions during the 1990s have been 90/10 units. The second relates to the creation of Total Force units by integrating Regular soldiers into Reserve units. These are called 10/90 units, again based on the respective proportions of Regular and Reserve troops which make them up. The latter of these two categories of initiatives are described in chapter three.

Two distinct attempts have been made to convert Reserve units into Total Force (10/90) units. One of these was undertaken by the artillery and one was undertaken by the infantry. Chapter three describes the experiences of units in each of these two arms as they have undergone the transformation from Reserve to Total Force status. The chapter describes how these changes impacted on organisational structure, operational efficiency and training in the affected units. It describes the obstacles that were encountered during this process as well as the lessons learned.

At the time of writing, the implementation of Total Force in the infantry was still in progress while the implementation of Total Force in the artillery had just been wound up. There were no secondary sources of information available with regard to either of these efforts. Information was gathered through personal interviews which were conducted in person or by telephone.

The experiences of these units offer some insights into the types of problems which will influence any attempt to convert Reserve units to Total Force status. They also give some hint as to how such an effort can be undertaken successfully.

1.4 An Overview of Chapter Four

The objective of this work is quite broad in scope - to explore how the Canadian Army can best use the Regular and Reserve Forces to construct an operationally ready Total Force. As a result, the literature review contained in chapter four is quite wide ranging.

We chose to use the concept of readiness, as defined by Hersey and Blanchard (1988), as the output of the military organisation in peacetime. According to Hersey and Blanchard readiness is composed of both ability and willingness.

Adair's (1986) work in the area of team building has also proven useful. In his Three Circles Model, Adair suggests that the team has three overriding needs, these being individual needs, group needs and task needs. He depicts each of these needs as overlapping circles and suggests that the effectiveness of the team will depend on the extent to which it can meet each of them. Each of these three circles appears to have important effects on readiness.

T.N. Dupuy, in his work *Understanding War* (1987) outlines how the outcome of battles can be predicted with some reliability based on estimates of a number of factors including the strength of each side and certain operational, environmental and behavioural factors. The behavioural factors, it turns out, are similar to readiness as defined by Hersey and Blanchard.

By combining the work of Adair, Hersey and Blanchard, and Dupuy we have constructed a framework which we call The Integrated Framework of Military Readiness, Unit Attributes and Battle Outcomes. This framework shows the interaction between each of these various factors.

1.5 An Overview of Chapter Five

The design of the empirical research is outlined in chapter five. The purpose of this research was to measure how well the Canadian Army is succeeding at building an operationally ready Total Force team and how well it is meeting the individual, group and task needs of it's members. Of particular interest were the similarities and differences between Regular and Reserve soldiers and between Regular, Total Force and Reserve units.

Survey instruments were created in order to measure the extent to which readiness was being achieved as well as the extent to which individual and group needs were being met. These surveys were administered to the soldiers of British Columbia District at the British Columbia Soldier Skills Evaluation in November 1994. The results of the BC District Soldier Skills Evaluation were made available and provided an objective measure of how well the task needs were being met.

A description of the sample, in terms of various biographical characteristics of the soldiers of British Columbia District, is also offered in this chapter.

1.6 An Overview of Chapter Six

This empirical research was an attempt to quantify the similarities and differences of Regular and Reserve soldiers in terms of readiness and in terms of the extent to which individual, group and task needs were being met. The results of

the empirical research is outlined in chapter six.

The results of the research relating to readiness were as follows: Regular and Reserve soldiers were rated by their superiors in terms of their individual readiness. The results suggest that Regular soldiers may have slightly higher levels of ability than Reserve soldiers but that the difference is not large. The results suggest that Regular and Reserve soldiers have similar levels of willingness. Reserve soldiers in both Reserve and Total Force units were asked to rate their units in terms of their collective readiness. The results suggest that Total Force units may have slightly higher levels of collective ability but that the difference is not large. The results suggest that Reserve and Total Force units have similar levels of collective willingness.

The results of the research relating to the individual circle were as follows: Reserve and Regular soldiers were asked to rate their respective levels of satisfaction or dissatisfaction with regard to fifteen different items. They were also asked a number of other questions designed to provide additional clarification. The results suggest that Regular soldiers are more satisfied across a broad scale of items than are Reservists. There is evidence that the difference is particularly marked with regard to recognition for a job well done, pension benefits and job security. Regular and Reserve soldiers were both dissatisfied with their pay.

The results of the research relating to the group circle were as follows: Reserve soldiers in Reserve and Total Force units were asked to rate their unit, compared to that or other units they had worked with in the past, in terms of a number of group factors. The results suggest that Reserve and Total Force units have similar levels of performance in terms of these items.

The results of the research relating to the task circle were

as follows: Regular, Total Force and Reserve units were rated on the proportion of their soldiers who could pass tests designed to assess their individual skill levels in a number of areas. While the small number of units made it impossible to use statistical techniques, Regular and Total Force units appear to score higher than Reserve units.

An analysis was undertaken to examine the interactive effects of these various items on each other. It was discovered that the individual, group and task circles appear to have only slight effects on each other. However, each of these circles appear have important effects on collective ability, collective willingness and collective readiness.

1.7 An Overview of Chapter Seven

In chapter seven, we offer a comparative analysis of the British, American and Canadian Reserve Forces across a number of areas. These include command structure, mix of units, size of units, demographics and the location of units. These also include the use of Regular Force personnel in Reserve units, the Reserve augmentation of Regular Force units, training schedules, recruitment and enrolment standards, training and promotion policies, pay and benefits, and operational evaluations.

Interviews were conducted with British and American officers familiar with the Reserve Forces in each of those two countries and much useful information was obtained. It was hoped that this comparative information would provide ideas and insights which could be used to spark positive reforms to the Canadian Reserve system.

1.8 An Overview of Chapter Eight

In chapter eight we attempt to place the current situation

of the Canadian Army into its proper political, economic and social context. In so doing, we outline the contents of the 1994 White Paper on Defence, the 1995 Federal Budget and the Report of The Special Commission on the Restructuring of the Reserves.

1.9 An Overview of Chapter Nine

In chapter nine, we offer specific recommendations for concrete changes which should be made in the Canadian Army Reserve. A self-imposed constraint, that recommendations should be expenditure neutral overall, was adopted. This was attempted despite an almost complete lack of reliable cost data. Justification for each recommendation is offered by referring to one or more of the following: the historical precedents, the initial experience with the implementation of the Total Force concept, the empirical research or the comparative analysis.

1.10 An Overview of Chapter Ten

In chapter ten we offer a summary of the findings, an assessment of the contributions made by this work, the limitations of the research and possible directions for further research.

CHAPTER II

BRIEF HISTORY OF THE CANADIAN ARMY

2.1 Introduction and Methodology

In this chapter we will describe the changing relationship between the Regular and Reserve Forces in Canada. This will be done by an examination of the standard sources of Canadian military history, not in an attempt to gather new facts, but rather to generate new interpretations of existing knowledge.

For most of Canada's history, Reserve soldiers provided for the bulk of her defence needs. Significantly, this was true up to and including the Second World War. Since the dawn of the Cold War, however, this situation has shifted to an almost total reliance on Regular soldiers. Memories, however, are short and many today, ignorant of all but the most recent history, underestimate the potential contributions of Reservists. The objective of this chapter is to examine the record as to how Regular and Reserve soldiers have been used in the past. Hopefully, by putting the current situation into a much broader historical context we will be able to better consider the options as to how these two components might best be used in the future.

2.2 Colonisation to World War I

It is often difficult to draw a clear distinction between the history of a country and the history of its military. Thus, much of the early history of Canada is actually the story of the efforts made by France, and then Britain, to claim, colonise and defend territory in the colder half of North America.

During the initial settlement of New France, the defence of the colony was provided by French Regular soldiers. These

troops built defensive works and fought against the Iroquois Confederacy. Upon retirement, these soldiers often received grants of land and became part of the local citizenry (Stanley, 1960). Widows, unwed mothers and occasionally women of ill-repute were sent to New France to join these retired soldiers in populating the new colony.

In April 1669, King Louis XIV informed the Governor of New France that he should "make the inhabitants [of New France] expert in the use of arms and in military discipline". To this end the Governor was instructed to "divide all my subjects dwelling in the country into companies keeping in mind their [geographical] situation; and after having divided them, appoint captains, lieutenants and ensigns to command them" (Stanley, 1960: 21). He further directed that these part time soldiers should be instructed in drill and provided with powder and ammunition.

This order was not affected over night, but by the middle of the next decade the Militia, composed of all able bodied men between the ages of 16 and 60, was an accepted part of life in the colony. Little real training was undertaken but everyone knew where to go and what to do in the event of an emergency. The threat of Indian raids or war with England combined public duty and private interest and made the average citizen a willing member of the Militia (Hasek, 1987).

The Troupes de la Marine were a small full time force raised from among the local inhabitants for duty in New France. Unlike the Regular troops from France, they were proficient in the irregular skirmishing type of battle which was effective against the Indians and which differed so dramatically from the set piece battles which were practised by European armies at the time (Hasek, 1987).

By the time of the Seven Years War, the French had thus

created a three-tiered military system in New France which consisted of French Regular troops, a Militia and the Troupes de la Marine (Hasek, 1987).

The senior officers of each of these organisations were drawn from the French professional officer class and, as was the custom throughout Europe, were selected and promoted more on the basis of birth than ability. Rifts naturally developed between the local troops and their imported superiors, but they also developed between the leaders of these three organisations themselves. These rifts, and the confusion they created, are often blamed as a contributing factor in the loss of Quebec by the French in 1759 (Hasek, 1987).

Among the first steps taken by the British, after their victory in New France, was to disarm the Militia and to dispatch the French Regular troops back to France. Aside from these steps the British military administration went to great lengths not to antagonise the local population: The Canadians continued to speak their own language, worship in the Roman Catholic Church and regulate themselves according to their established legal system. In fact, the British quickly discovered that they could most efficiently and economically govern their new colony by relying on the very Militia system which had been used by the French. According to Stanley (1960: 99),

“The captains of Militia continued to act as justices of the peace and to look after public and community affairs in general, such as repair of roadways, clearing of ditches, and maintenance of bridges. In no instance do we find that Canadian Militia officers abused the trust which was placed in them. They did not use their official position in an alien regime to incite the people to rebellion.”

A level of trust and respect slowly developed between the French Canadians and their British governors. While the French Canadians were perhaps never entirely enthusiastic about their position within the British Empire, they did regard

it as preferable to absorption by the United States. Twice in forty years, first during the American Revolution and later during the War of 1812, they fought against the Americans at the side of the British.

The military system which the British created in the other Canadian provinces was similar to that which they had inherited from France in Quebec. Militias were formed with compulsory terms of service for all able bodied males between the ages of 16 and 60. However, the vigour with which these Militiamen actually trained varied with the situation of the day. Some years no training was conducted at all. On the other hand, some of these Militiamen were placed on active duty during the American Revolution and later again during the Napoleonic Wars. These local soldiers formed "Fencible" Regiments which served full time but whose terms of service restricted them to duty in North America. British Regiments were stationed in Canada, or were withdrawn, depending upon the local threat and the requirements elsewhere. Full scale war, such as the War of 1812, occasioned the importation of large numbers of professional European troops, usually German Hessians, commanded by British officers (Stanley, 1960).

Canadian military history, during the years following the Napoleonic Wars, can be best understood in the context of British Imperial policy, which was to avoid continental entanglements and to use military force as sparingly as possible. The British Army was expected to preserve the integrity of the largest empire the world had ever seen and do it on a shoestring (Stanley, 1960).

(000s omitted)	1816	1830	1860	1880
United Kingdom	255	140	347	248
France	132	259	608	544
Russia	800	826	862	909
Prussia/Germany	130	130	201	430
Hapsburg Empire	220	273	306	273
United States	16	11	26	36

Table 2-1: Military Personnel of the Great Powers (Kennedy, 1987: 154)

The British garrison in Canada was expanded to some 13,000 men during the Rebellion of 1837 but was reduced to a more sustainable level of about 7,000 soldiers by 1852. The Crimean War, which began in 1854, necessitated the withdrawal of many of these troops and the size of the garrison fell to fewer than 3300 men (Braithewaite, 1976).

During the Crimean War, it became apparent that Canada could not rely exclusively on the British for her defence. The Militia Act of 1855 resulted largely from this recognition and the perceived inefficiency of a large compulsory Militia. This Act still required universal male service in the Militia, however, a new volunteer 'Active Militia' was created which would undertake real training. This force was to consist of sixteen troops of cavalry, twelve companies/batteries of artillery and fifty companies of riflemen. These troops would train for 10 days per year (twenty for artillery) and in a break with previous practice, these men would be paid. This force, with an authorised strength of 5,000 men, represented the birth of the modern Canadian Army (Stanley, 1960).

The confederation of the provinces of Ontario, Quebec, Nova Scotia and New Brunswick in 1867 was primarily an attempt to strengthen their ability to resist the economic, political and military strength of the United States. However, after Confederation it was still unclear where the primary responsibility for defence lay. A year previously Disraeli had written to Lord Derby (Stanley, 1960: 240),

"We must seriously consider our Canadian position which is most illegitimate. An Army maintained in a country which does not permit us even to govern it! What an anomaly!... Power and influence we should exercise in Asia; consequently in Eastern Europe, consequently also in Western Europe; but what is the use of these colonial deadweights which we do not govern?"

In 1868 an Act of Parliament was passed which increased

the size of the voluntary 'Active Militia' to 40,000 men and perpetuated the 'Reserve Militia' which consisted of all able bodied men between the ages of 16 and 60. By 1869 the 'Active Militia' consisted of 37,170 men and the 'Reserve Militia' of 618,896 men. The British garrison, which was 16,000 strong in 1867, had been reduced to 1,500 by 1871 (Morton, 1970).

While Canada's Militia grew to its authorised levels during these years, its quality still left much to be desired. By the early 1880s the situation had become intolerable and it was determined that a small full time force should be created. The Militia Act of 1883 authorised Her Majesty to "raise, station and maintain, in addition to the ordinary Active Militia Force, one troop of cavalry, three batteries of artillery, and not more than three companies of infantry, the whole strength of which several Corps shall not exceed seven hundred and fifty men." In addition to regular duties, these Corps were to "serve as practical schools of military instruction, by affording officers, non-commissioned officers and men of the Militia opportunities for courses of study and training (Stanley, 1960:248)."

It should be noted that during these early years all land forces in Canada, both full time and part time were referred to as Militia. (This continued until 1941 when the land forces were officially redesignated as the Canadian Army.) The full time component of the Militia was called the Permanent Active Militia. This corresponds to what would later be called the Regular Force. The part time component of the Militia was called the Non-Permanent Active Militia. This corresponds to what would later come to be called the Militia or the Reserve Force. For simplicity and consistency we will henceforth adopt the modern usage of the terms Regular for full time soldiers and Militia or Reserve for part time soldiers.

This Regular Force was to become the central repository of knowledge and expertise for the young Army. Militia soldiers

would attend courses run by the Regulars and sometimes serve with Regular units for a period. According to Stanley (1960: 249),

“The number of certificates of qualification that were granted to the officers and men who attended the various courses suggest that the Permanent (Regular) Force was, within a few years of its inception, beginning to exercise a substantial influence upon the Militia.

Despite the positive effects of the Regular Force on the level of Militia training, relations were often tense between the two components. Militia units during these years were often as much social clubs as they were military units and command often went to the most prominent or wealthy member of the community rather than to the best soldier. Political patronage existed then in spheres unheard of today and commissions and promotions were often dependent upon one's political persuasion. Many of these 'political Colonels' resented any attempt to impose military standards upon them. The cleavages which existed between the Regular Force and the Militia were mirrored in the cleavages which existed between the British General Officers Commanding and the Ministers of Militia. The British GOCs fought to establish ability rather than patronage as the principle upon which promotions would be based. The Ministers resisted this fiercely, and for the most part successfully, until well into World War I (Morton, 1970).

If the Canadians took a leisurely attitude toward their own defence, there was seldom any perceived urgency in doing otherwise, as they felt insulated and protected by their geography and their neighbours. Canadian Prime Minister Wilfred Laurier wrote to Major-General the Earl of Dundonald, the new General Officer Commanding (Hasek, 1987: 107),

“You must not take the Militia seriously, for although it is useful for suppressing internal disturbances, it will not be required for the defence of the country as the Monroe Doctrine protects us against enemy aggression.”

Canadians then, were in no more hurry to expend money on their own defence than Britain was to spend it for them. Total expenditures on defence in 1910 were \$6,000,000 or 7.4% of government spending. The bulk of this was spent to pay, train and house the augmented Regular Force of approximately 3,000 soldiers (World Almanac, 1988).

In 1914, the Canadian Army was ill-trained and unequipped for war. While some efforts to improve the situation had been made in the years after 1910, there were still many defects apparent. Training was haphazard, and officers and non-commissioned officers were often promoted to the next rank without having passed the requisite qualification tests. Equipment, uniforms, weapons and ammunition were all in short supply and often unsuited to the requirement. The small Regular Force was somewhat better off but relations between them and the Militia were often strained (Stanley, 1960).

Mobilisation plans, which had been drawn up in 1910, called for the activation of Militia Regiments within an existing six Division structure. Members of the Regular Force would be called upon to use their expertise and knowledge to train the Militia to the required standard and also to serve in key staff and line positions within these formations (Stanley, 1960).

According to Stanley (1960: 307),

“It is obvious, even to the uninitiated, that when a military force is required to pass rapidly from a peace to a war footing - the process known as mobilisation - confusion and chaos will result unless plans have been made in advance. Tables of war establishment and scales of equipment must be prepared ahead of time in precise detail. Reserves of arms, equipment, clothing and supplies of every description from attestation papers to vehicles must be immediately available. Places of assembly must be fixed in advance; railway time-tables must be worked out in advance; a system of recruiting and handling men on enlistment must be devised and not left to improvisation. And in Canada climatic conditions necessitate different mobilisation procedures for summer

and winter.”

Whether the plans outlined above would have worked will never be known. Upon the outbreak of war Colonel Sam Hughes, the Minister of Militia, scrapped them and began to improvise. Rather than utilising the existing Militia units as the basis for mobilisation, he ignored them, and created entirely new units to which he gave numbers instead of names. He embarked personally on a recruitment drive, filled these new units with men fresh off the street, and began to ship them to England. In principle these units were to have been fleshed out with instructors from the Regular Force and with officers and NCOs from the Militia. However, the staff organisation which could have co-ordinated this immense undertaking simply did not exist. Units arrived in England without officers, infantry arrived without rifles and cavalymen arrived without horses (Hasek, 1987).

Much of this confusion could have been avoided by simply activating existing Militia units as the mobilisation plans dictated. Whatever the weakness of individual units, they were active, functioning organisations. Soldiers who have worked together over a long period know each others strengths and weaknesses and can often work within or around the formal structure to accomplish their tasks. Units formed with men who don't know each other, who are thrown together at the stroke of a pen, develop this type of cohesion only with time.

Despite the mistakes which were made, the passing months saw these newly created units become real to the men who served in them. The bonds that hold soldiers together began to form and the Canadian Expeditionary Force continued to grow. By early February 1915, Canada had landed in France an entire Division consisting of over 33,000 men and 7,000 horses. A second Division reached France in September 1915. A third Division was in action by the early months of 1916 and

a fourth by August of that year. A fifth Division was organised but was broken up to provide reinforcements for the first four (Stanley, 1960).

Together, these four Canadian Divisions were eventually to comprise the 1st Canadian Corps. Command of this Corps went initially to two British officers, first Lieutenant-General E.A.H. Alderson and then Lieutenant-General Julian Byng. However, in June 1917, command was passed to a Canadian, Lieutenant-General Arthur Currie. This appointment, of a Canadian to the command of a Canadian Corps, was an important milestone in the history of the Canadian Army and an important turning point in the coming of age of a nation (Stanley, 1960).

Lieutenant-General Currie was, by common agreement, one of the outstanding commanders of the war and, like most of his Division and Brigade commanders, he was a product of the Militia. Before the war Currie had owned a real estate agency in Victoria and in his spare time he had served in the Militia, eventually commanding an Artillery Regiment and later an Infantry Battalion. As a Militiaman, Currie was not as well trained as his Regular Force counterparts. However, the war turned out differently than the experts predicted. The infantry gave way to barbed wire and machine gun bullets. The cavalry ceded their role to the armour. Militiamen like Currie often reacted with more flexibility toward these unforeseen situations. With their wits sharpened from years in the private sector they were more willing to look for creative solutions to new problems (Berton, 1986).

It is safe to say that by the end of the war, the Canadian Corps was dominated, not by the Regular Force, but by the Militia. Currie was in fact considered by Lloyd George as a possible replacement for Haig as the Commander of all British Forces. It is possible that had the war continued, the British

Army would have eventually been commanded by a Canadian Militiaman (Stanley, 1960).

By the end of the war the Canadians had made their contribution felt. A country with a population of a little over eight million had put 628,462 into uniform. Of these 425,589 served overseas and 60,661 were killed (Stanley, 1960).

2.3 Inter-War Years and World War II

Just as war had erupted suddenly and found Canada unready for the sacrifices which lay ahead, it also ended suddenly and found the country unprepared for the massive task of demobilisation. Few had expected the German Army to crumble as rapidly as it did in 1918. Little forethought had been given to the huge task of returning hundreds of thousands of men to their homes.

The Canadian Expeditionary Force (CEF), which had a strength of over 300,000, was brought home gradually during 1919. Most of these men had been civilians before the war and most were eager to be civilians again. The majority simply turned in their kit, collected their pay and returned to their hometowns or farms (Hasek, 1987).

The 258 Infantry Battalions, 15 Cavalry Regiments and other units which made up the CEF were, for the most part, simply disbanded. Each CEF unit passed on its battle honours to a Militia unit from the area in which it had been raised. In this way, for example, it is said that The Highland Light Infantry of Canada perpetuates the 34th and 11th Battalions of the CEF (Stanley, 1960).

This method of demobilisation made sense to the staff planners in Ottawa. The existing Militia units were well established, with deep roots in their communities, and it would

be simpler and cheaper to disband the CEF units and to retain the Militia units than the reverse. However, to the returning veterans, the cold logic of this argument was not compelling. To their minds it was the Battalions of the CEF which had fought and won the battles of the First World War, and it was these units which had earned the right to exist. The returning veterans of the CEF did not understand why the battle honours of their Battalions and Regiments should be taken over by Militia units with little or no glory of their own.

The returning members of the CEF did not join the Militia in large numbers. Incredibly, they were not even made particularly welcome. Militia officers who had already served long years before the war and who carried the substantive rank of Lieutenant-Colonel or Major were often unwilling to step aside for those who had served in action. Men returned from the war wearing acting, temporary or brevet rank only to be told that if they joined the Militia they would revert to their permanent rank which was sometimes two or three grades lower. Thus, a man who had commanded a company or Battalion in battle could face the prospect of reverting to the rank of Lieutenant should he choose to join the Militia. And in doing so he would likely find himself reporting to an officer who had himself been turned down as unfit for active service (Hasek, 1987).

In the years following the war the Army was reorganised. The Regular Force was augmented to include the batteries of the Royal Canadian Artillery; two Cavalry Regiments, the Royal Canadian Dragoons and the Lord Strathcona's Horse; and three Infantry Battalions, the Royal Canadian Regiment, the Princess Patricia's Canadian Light Infantry and the Royal 22nd Regiment. The authorised strength of this Regular Force was increased from the pre-war level of 3,100 to 10,000 although this was never attained (Stanley, 1960).

The overall organisation of the Army was also changed. The pre-war organisation combined the Regular Force and Militia into a six Division structure. In place of this a new structure of eleven Infantry Divisions and four Cavalry Divisions was brought into being (Stanley, 1960).

It is natural that in the years after a great conflict, the attention of the victor will turn away from military affairs. However, Canada, sick of war and protected by three oceans, reduced her commitment to her military even more than most countries. For the year ending March 31, 1924 the Department of National Defence calculated that Canada's per capita expenditure on defence was \$1.46. This was in comparison with \$3.30 for Australia, \$6.51 for the United States, \$23.04 for Great Britain and \$26.66 for France (Stacey, 1966).

Canada's defence efforts were even smaller after the First World War than they had been before it. Fewer men were trained during each year of the 1920s than had been trained during the ten years before the war. This situation, as unsatisfactory as it was, was only to be exacerbated by the effects of the Great Depression. Expenditures of \$11,111,148 during fiscal year 1928-29 were pared to \$8,718,880 by 1932-33 (Stanley, 1960).

These cutbacks had real effects on military preparedness. Equipment, much of which was either obsolete or worn out, was not replaced. Authorised training was cut back, both in terms of duration and numbers of soldiers. And pay was so low that service in the Militia often resulted in a net financial loss for the officers and men who served (Stanley, 1960).

In some ways, however, the worst neglect of these years was not financial but moral. Victory seldom provokes real self examination on the part of the victor. It is a truism that victorious armies continue to prepare for the last war and this

is what the Canadian Army did. In 1936, there were still 36 Cavalry (horse) Regiments on strength but Canada owned not a single tank (Stacey, 1966).

Some of these problems were rectified by the reorganisation of the Army in 1936. This reorganisation reduced the number of Divisions to seven from fifteen. With this reorganisation came a wholesale amalgamation of units, many of which had long been chronically understrength. The number of Cavalry Regiments was reduced from 35 to 16, four of which became armoured car units. The number of Infantry Battalions was reduced from 123 to 59. However, 14 new Machine Gun Battalions were created bringing the total to 26. Six new Tank Regiments were created. The Royal Canadian Artillery was increased in size by 52 batteries. This reorganisation, while it made the Militia smaller on the whole, provided a balance between the various arms which had previously been lacking. Every effort was made "to preserve, as far as possible, battle honours, traditions, and unit names either by the amalgamation of units of the same arm or conversion to some other arm" (Stanley, 1960: 346).

The Second World War was not as unexpected as the First World War had been. The aggressive nature of Hitler's Germany had become apparent during the latter half of the 1930's. By 1939 the question in most minds was not whether war would come but when. As a result, the Canadian Army, while still woefully undermanned and underequipped, was more ready for the challenge that it faced than it had been 25 years earlier.

During the inter-war years, mobilisation plans had been prepared based on four main contingencies. Plan No. 1 assumed a war with the United States. Plan No. 2 assumed a war with Japan. Plan No. 3 assumed a war in Europe. Plan No. 4 assumed the need for Canadian troops elsewhere in the

British Empire.

Hitler invaded Poland on September 1, 1939. A week earlier, The Minister of Defence had already begun to implement Mobilisation Plan No. 3 by placing 99 units of the Militia on 'voluntary active service'. These units were to be used to provide security for vital points such as bridges and government buildings. All other units began preparations for a general mobilisation. On September 1, 1939 the Adjutant-General telephoned all District HQs with orders to mobilise. District Commanders notified individual units and previously laid plans were carried out. All of this took place well before Canada's official declaration of war on the 10th of September (Stacey, 1966).

During the First World War, Militia units had supplied many of the officers and men, and had been involved in the initial recruiting and training of soldiers, but their role ended there. Soldiers thus enrolled were placed in the numbered Battalions of the CEF and no particular relation between those units and existing Militia units was afterward maintained.

During the Second World War, the Militia units themselves were activated. For example, the 48th Highlanders of Canada CASF, was a Battalion within the Canadian Active Service Force and fought in Sicily and Northwest Europe. Its parent unit, the 48th Highlanders of Canada Reserve, attended to the recruiting and training of volunteers who were then sent to join the unit in Europe. The units of the Active Service Force then, were in effect, the overseas Battalions of their parent Militia Regiment (Stacey, 1966).

How did this process of mobilisation work? District HQs, upon receiving the mobilisation order, issued their own orders to individual units. These orders had been drafted in advance and units prewarned of their contents. Items which had already

been considered and decided upon included; the number of recruits the unit should enrol, the number and type of weapons and transport which would be allocated, the place at which the unit should mobilise, and arrangements for feeding and accommodations. Units had even received blocks of service numbers to issue to their recruits on enrolment (Stacey, 1966).

The first step in the mobilisation of a Militia unit was generally a parade of the unit's personnel and a call for volunteers. For example, one infantry unit is recorded as having paraded 30 officers and 251 other ranks on the 2nd of September, 1939. Of these, 29 officers and 156 other ranks volunteered for active service. This Battalion's wartime establishment called for 26 officers and 774 other ranks. Recruiting brought this unit to full strength by the 19th of September (Stacey, 1966).

Of the 58,337 men and women who joined the Active Service Force in September 1939, 24,089 had previously served in the Militia. A further 4,986 had served in the Regular Force. Together, these soldiers provided the framework upon which a new Army of some 494,000 would eventually be created (Stacey, 1966; Defence, 1980).

The local sentiment aroused by the mobilisation of existing units was further developed as Brigades were also organised on a regional basis. The 1st Brigade was composed of units from Ontario. The 2nd Brigade was composed of units from Western Canada. The 3rd Brigade contained units from the Maritimes and Quebec. The 4th Brigade came again from Ontario, the 5th (originally) was from Quebec and the 6th was from the West (Stacey, 1966).

According to the original plan the Regular Force would not be among the first Divisions sent overseas. It was felt their expertise would best be used to train and prepare the Militia.

This plan was modified however, and the 1st Canadian Infantry Division included one Regular Force Battalion in each of its Brigades (Stacey, 1966).

The bulk of the 1st Infantry Division sailed for the United Kingdom during December 1939. The 2nd Infantry Division was assembled slowly, owing to deficiencies in accommodation, uniforms, weapons and transport, and it did not reach the UK until late 1940. The 3rd Infantry Division arrived in the UK during the Summer of 1941. The 5th Armoured Division arrived in the UK in the Fall of 1941 and the 4th Armoured Division arrived in early 1942 (Stacey, 1966).

The arrival of the 4th Armoured Division occasioned the creation of a second Corps and an Army Headquarters. Despite many small adjustments, this Army consisting of two Corps, which included three infantry Divisions and two armoured Divisions, would remain intact throughout the war. This was the first time Canada had fielded a full Army (Stacey, 1966).

As we have seen, the Canadian Army in Europe was composed primarily of units drawn from the Militia. Of the 217,000 men serving in the Canadian Army overseas in May 1945, fewer than 4,000 had been members of the Regular Force upon the outbreak of the war. The remainder were Militiamen who had been placed on active duty or civilians who had joined during the war. While it is clear that the Militia provided the organisational infrastructure around which the Army was built, it is also true that to a great extent it provided the human infrastructure as well. The Militia provided the vast majority of the officers and non-commissioned officers for the new force (Stacey, 1966; Defence, 1980).

As in the First World War, these Militia officers often rose to prominence. According to Stacey (1966: 415),

"The Canadian Army of 1939-1945 found its commanders and staff officers almost entirely within itself. To a considerable extent the Canadian Permanent (regular) Force played the part that the British Regular Army had played in 1914, particularly with respect to senior staff appointments.... Where nobody has had much experience of actual operations, the professional soldier, who has devoted his life to the study of military matters, has a great advantage over the non-professional. But no peacetime studies can compare with battle experience as a school for either leadership or staff work: and when the Army finally got into large-scale action the distinction between the Regular and the citizen officer, already much blurred, soon virtually ceased to exist. Early in 1945, the staff lists of Canada's five fighting Divisions showed not one of the ten senior staff appointments (General Staff and administrative) held by a pre-war Regular officer; and in the last months of the war, as we have noted, three of the five Divisions were commanded by citizen soldiers, as were also both the independent armoured Brigades. The Army Commander and the two Corps Commanders, however, were Regulars."

2.4 The Cold War

At the end of the war, Canada enjoyed a position of relative strength unlikely to be seen again. She controlled the third largest Navy in the world after only the US and the UK. Her Air Force was the fourth largest in the world after only those two countries and the Soviet Union. Her half-million man Army was probably the fourth or fifth most powerful in the world. Canada basked in the glow of victory. Her economy was booming and her future had never seemed so bright (Morton, 1985).

By the spring of 1946, the Canadian Army had returned home from Europe and had given discharge to the majority of its personnel. There were many parallels between this demobilisation and the one which was conducted after World War I, however there was also one major difference. Canada's relative economic and military strength dictated she remain a full member of the world community. Canada joined the United Nations. She helped to found the World Bank and provided

substantial aid to Great Britain and other European nations. She also maintained an enlarged Regular Force.

In 1946, it was announced that the establishment of the Regular Army was to be set at 25,000. By contrast the Navy and Air Force were allocated 10,000 and 16,000 full time positions respectively (Stanley, 1960).

On the surface, the position of the Reserve Force was also much improved after the war. There were plenty of experienced officers and NCOs in the Regiments. Equipment and ammunition was plentiful as a result of bulging war stocks, And budgets were much less restrictive than they had been before the war. However, the relative importance of the Reserve Force, in comparison with that of the Regular Force, was declining. Before the war 45,631 Reservists had outnumbered the 4,095 Regulars tenfold. By 1948 the number of Reservists had fallen to 33,591 while the Regular Army had grown to 15,885 (Defence, 1980).

As Canada tried to settle into the comfort of her post-war existence the threat of war again began to cloud the horizon. In 1949, the United States, Canada and ten European nations joined together to form the North Atlantic Treaty Organisation. By agreeing that an attack on any member country would be treated as an attack on all, the signatories hoped to reduce the chance of Soviet aggression. Canada slowly began to embark on a program of rearmament (Morton, 1985).

On June 25, 1950, a North Korean force attacked across the 38th parallel. Previously considered plans for the collective security of Western Europe became, simultaneously, out of date and vital. The aggression in Korea was commonly seen as feint, and a prelude to war in Europe. Canada, like the United States, was faced with the difficulty of embarking upon a military build-up in two theatres on opposite sides of the world.

In Canada's case this meant contributing an Infantry Brigade to the shooting war in Korea, while sending another for reinforcement to West Germany. These simultaneous mobilisations proved both the value and the limitations of the Reserve (Melady, 1983).

The Brigade which was dispatched for service with NATO was primarily a Reserve affair. Fifteen Reserve units contributed 2 companies each to the formation. These units stayed in place for over two years, with some rotation of personnel, until they were relieved by elements of the Regular Force (Stanley, 1960).

The manning of the Brigade for Korea posed different problems. It was to be thrust, with a minimum of time for training, directly into a shooting war. It was therefore composed primarily of Regular Force Battalions, augmented by veterans of World War II and volunteer Reservists. Only a few recruits would be accepted directly from the civilian world. A conscious political decision was made against activating any Militia units for service in Korea. Much the same considerations would later deter President Johnson from mobilising National Guard units. As Brigadier Teddy Leslie put it, "Militiamen tended to have mothers" (Hasek, 1987).

As John Melady (1983: 38) describes those who enlisted,

"There were boys of fourteen who wanted to look older and men of sixty who claimed to be forty-three. Many were running from debts, their wives or the law. Others came because they needed work. Many who turned up wanted to relive their imagined glory from the days of the Second World War. Some came because their buddies came. Hundreds showed up because they wanted excitement, a break in what were otherwise humdrum lives. Many signed up on the spur of the moment, with no more thought than they would give to which coat they might wear to a corner store."

These soldiers were, for the most part, inducted into and

trained as part of one of the three Regular Infantry Regiments, the Royal Canadian Regiment (RCR), The Royal 22nd Regiment (R22R) and the Princess Patricia's Canadian Light Infantry (PPCLI). Like many of the soldiers they commanded, some of the officers of this force were civilians when the war began. Brigadier John Rockingham, who was to command the Canadian Brigade, was living in Vancouver and working as a superintendent of a bus company. 'Big Jim' Stone who would command the PPCLI, was running a summer resort in the interior of British Columbia. Jacques Dextraze, who would command the R22R, and later become Chief of the Defence Staff, was working for a sewing machine company in Quebec (Melady, 1983).

By the end of the war, Canada had sent 25,000 men to fight in Korea. She was able to fulfil this obligation partly because she could rely on the Reserve to fulfil another equally pressing obligation in Europe. Once the shooting stopped in Korea, Regular Force Battalions replaced the Reservists in Europe and began what would eventually be a thirty year stay.

The Cold War eased little during the 1950s as Soviet and Western armies eyed each other warily. Our military doctrine was based on the idea that outnumbered Western troops would bring a Soviet invasion of Europe to a standstill by fighting an aggressive defence bolstered by the use of tactical nuclear weapons. Such a war would have been shorter and more violent than anything seen before (Hasek, 1987).

When contemplating a war which was expected to decimate a continent and be over in a matter of weeks, Reservists, who would take months deploy, were seen as having limited value. It was believed that troops would have to be fully mobilised, trained, equipped and in place before the start of any such conflict in order to have any value. Accordingly, defence policy during this period began to shift strongly toward reliance

on the Regular Force.

Between the start of the Korean Conflict in 1950 and the cease-fire in 1953, the Regular Army grew from 20,652 to 48,458, and then remained at that level for the next 15 years. The Reserve reached a post-war peak of 46,936 in 1952 and then began a 20 year decline. This was the first time in Canada's history that the primary burden of defence was placed on the shoulders of full time professional soldiers (Defence, 1980).

In 1956, Ralph Campney, the Minister of National Defence, announced that the Reserve would no longer train for a combat role, but would henceforth assume primary responsibility for civil defence. The Generals resisted but after 1957 the annual Reserve summer training camps were cancelled and in 1959 Reservists began training for their new role - cleaning up the mess after a nuclear war. Morale in the Reserve plummeted and numbers fell (Hasek, 1987). In less than 20 years the Reserve had gone from forming the bulwark of the nations defence to the verge of irrelevance.

In 1964, Paul Hellyer, the newly appointed Minister of National Defence, cut the authorised establishment of the Reserve from 80,000 to 30,000. He disbanded 55 units and closed 114 armouries in small towns across the country. Actual strength plummeted to 24,000 within a year. In 1971, the process was repeated, the authorised establishment was cut to 20,000, 69 units were disbanded and 41 armouries closed (Porter, 1978; Willet, 1987)

The reality behind these numbers can probably be best understood by reference to a single unit. In 1958, 15th Field Regiment, Royal Canadian Artillery was composed of 5 batteries of 80 - 100 men each. Three of these batteries had the unit armouries in Vancouver to themselves one night per week. The fourth battery was located in Ladner, a small town 40 miles

South of Vancouver. The fifth battery paraded in North Vancouver, approximately 20 miles from the main armoury. By 1975, the unit consisted of two batteries, only one of which was operational, and even that was chronically understrength.

It is perhaps worthwhile to consider the reasons why people had previously joined the Reserve. Willet (1987) in his sociological study of the Reserve, suggests that membership in a good unit carried distinct social advantages, particularly for the officers.

It is difficult to imagine today, but in a world before discos, night clubs and beer stores, membership in a mess was a social advantage. And in a world before television, VCRs and virtual reality, people spent more time at community events such as Dominion Day celebrations where the local Militia Regiment and especially its band would likely be a focal point. Speaking about the attraction of the Militia during the inter-war years Willett (1987) says,

“...The Militia attracted officers because a commission still held much of the social credibility it had in the past. Belonging to a good Regiment still counted socially, especially commanding it, and influential citizens through whom civilian careers could be advanced could be met in the messes.”

In other words, quality people joined Reserve units because quality people could be found there. Willett (1987) goes on to suggest that it was especially these successful and socially prominent members who abandoned the Reserve when successive rounds of cutbacks undermined its role and effectiveness.

One of the recurring problems of military administration during the 20th century, both in Canada and abroad, has been the need to achieve a level of co-operation and co-ordination between the Naval, Air and Land Forces. The question, of

course, is how much integration between the services is necessary or even beneficial? Some areas such as recruiting, public relations, pay and purchasing cry out for streamlining and amalgamation. During the 1950s efforts were made to achieve a degree of standardisation through the use of interservice committees. In 1964 a further step was made with the creation of a single Chief of the Defence Staff. Both these steps paralleled similar developments which were taking place in the UK and the US (Morton, 1985).

In 1968, the Canadian government went much farther than any other nation had done to 'unify' the armed forces - it abolished the Royal Canadian Navy, The Royal Canadian Air Force and the Canadian Army. In place of the three services, a unified Canadian Armed Forces was created which was divided into a number of commands. Maritime Command was to provide naval air support and naval sea support for military operations and to conduct antisubmarine warfare. Mobile Command was to stand ready to move combat land and air forces to any part of Canada on short notice. Air Defence Command was to co-operate with United States military forces to defend North America from air attack. Air Command was to provide most of the air transportation for the other commands. Training Command was to give basic combat and technical training. Communications Command was to operate the communications network both in Canada and overseas. Materials Command was to provide logistical support to the other commands. (Braithewaite, 1976; Morton, 1985)

Whether such an organisation could have succeeded in war is not known. What is certain however, is that these changes caused massive disruption and huge morale problems. Generals and Admirals resigned in protest. Recruitment fell. Training standards were reduced to that of the lowest common denominator (Hasek, 1987).

'Unification', which was signed into law February 1, 1968, was greeted with undisguised hostility by members of the three former services. Perhaps the largest contributing factor in this was the decision to provide all members of the Canadian Armed Forces with identical uniforms. Gone was the white and navy blue of the Royal Canadian Navy. Gone was the light blue of the Royal Canadian Air Force. Gone was the khaki of the Army. Gone too were most of the badges and flashes and unique headdress which distinguished different units and trades. In replacement was a generic uniform of dark green. Even ranks were standardised, using naval stripes for the officers and Army chevrons for the enlisted men. Few were satisfied.

In 1969, Canada's NATO contingent of 10,000 was cut in half. As a result, the remaining troops were withdrawn from the important sector with the British Army of the Rhine and placed far from the front with the American Army in Southern Germany. A year later, three of six Regular Force Infantry Regiments were disbanded reducing the number of Regular Battalions from thirteen to eight. The total manpower of the Regular component of the Canadian Armed Forces (Army, Navy and Air Force) had already dwindled from 120,781 in 1963 to 110,000 in 1967. By 1976, it had been cut further to 76,000 (Morton, 1985; Hasek, 1987).

Unification and cutbacks both contributed to the organisational malaise which existed in the Canadian Forces during the 1970's but these were far from the only contributing factors. Official bilingualism was imposed with great vigour upon the Canadian Forces causing lengthy delays in promotions for anglophone members. A large civilian bureaucracy was created at the Department of National Defence, thus stripping the military of much control over its own affairs. And perhaps most importantly, the Canadian Forces felt little political support or leadership during these

years. The Prime Minister appeared hostile, or at least indifferent, to the Canadian Forces and during these years the Defence portfolio came to be seen as a political backwater. Eight relatively junior ministers paraded through the job in eleven years, leaving no lasting impression.

The Reserve fared badly. No new equipment was purchased. Budgets were cut. Rates of pay, already low, failed to keep pace with inflation. And the role that the Reserve would play in the event of hostilities remained anyone's guess. By 1974, the Reserve had shrunk to fewer than 13,270 members. When one divides this number among approximately five Area headquarters, 21 District headquarters and 136 units, one can see how ineffective the Reserve had become. (Defence, 1980; Defence, 1974)

The Regular Force did not fare much better during these years and by the late 1970s it was clear that they could not meet even their limited taskings. Augmentation of Regular units by individual Reservists on short term contracts was an option increasingly used to plug gaps on the cheap. While this gave a small number of Reservists valuable training it often had the unfortunate effect of denuding Reserve units of their best junior NCOs and officers (Defence, 1982).

This system of individual augmentation became the virtual *raison d'être* of the Reserve. It became clear that while the Regular Force viewed the junior officers and junior NCOs of the Reserve as good raw material, they saw the senior officers and senior NCOs as poorly trained and unfit. In many cases this view was correct.

During these years the Regular Force and the Reserve Force tended to operate in mutual isolation. They had different enrolment requirements, separate training programs and remarkably dissimilar remuneration packages. They conducted

their exercises separately. Even the command structure tended to reinforce the separateness of the two components. Contact occurred between Regular and Reserve soldiers only in limited ways. Regular Force instructors sometimes taught on Reserve courses. A small number of Regular personnel were attached to Reserve units. Reserve personnel sometimes received call outs to work with Regular Force units for short periods. But most Regulars and Reservists had little contact with soldiers in the other component. There was no particular hostility between the two components, they were both simply preoccupied with their own problems.

By the late 1970s the trend, which for so long had been against the Canadian Forces in general and the Reserve in particular, began to change. The Vietnam Syndrome was beginning to dissipate. Soviet aggression was becoming more blatant and the world moved to the right with the election of Margaret Thatcher and Ronald Reagan.

Interest turned to the Reserve. In 1982, Mobile Command (The Army) contained 17,636 Regular and 15,500 Reserve personnel. Commanders began to see the Reserve as an area where operational capabilities could be improved while operating within the fiscal constraints (Defence, 1982).

In 1982, six Reserve Regiments of the Royal Canadian Artillery were given 'operational taskings' to provide batteries to train with the Regular Force. These units were to undergo additional training during the 1982-83 training year and then were to take part in a field exercise with the Regular Force in March 1983. The success of these exercises convinced the military planners the Reserve could indeed be trained to a standard which would allow them to contribute effectively on an operational basis. By 1984 operational taskings had been given to the Reserve for six field batteries and an artillery headquarters, three airborne infantry platoons, a defence and

security company and four defence and security platoons. During 1984, the Reserve operational taskings were greatly expanded to include twelve armoured troops, one reconnaissance troop and six reconnaissance detachments, three assault troops, seven infantry companies and twelve engineer tasks at the section and troop level. (Defence, 1982; Defence, 1983)

A Progressive Conservative government was elected in 1984, partly on a pledge to increase defence spending and to revitalise the nation's military. In 1987, the government published a White Paper on Defence outlining its defence policy, the first such attempt since 1971. In it the government committed itself to increase defence spending and to a large build-up of the Reserve. The White Paper stated (Challenge and Commitment, 1987: 65-67),

In the early days of the nuclear threat, Canada's naval, land and air reserves were cut dramatically. It was commonly believed that any war would be short, and the value of reserves, which would take some time to mobilise, was therefore seriously questioned. By the 1970's, the Reserves had little capacity to contribute usefully to the country's defence. This situation has been exacerbated by budgetary stringency, which limited the resources available to the Reserves even more than those for the Regular Force. In most NATO countries Reserve forces outnumber their Regular Force counterparts. Canada stands out as a glaring exception, with only one quarter as many active Reservists as Regulars.

It is now clear that it is both impractical and undesirable to try to meet all of our personnel requirements through the Regular Force. The costs attached to an all-volunteer, full-time military force have become too high. In many cases, the tasks which the Regulars are called upon to undertake can be carried out by trained Reserve personnel. Furthermore, we will be able to address the serious multiple-tasking problems now facing the Regular Force if appropriate numbers of trained Reservists are available.

If the Reserve Force is to be used fully and effectively, the distinction between Regular and Reserve personnel must be greatly reduced. Their responsibilities must be

integrated into a Total Force Concept. For example, a unit responding to an emergency could be manned by any mix of Regulars and Reservists. The proper ratio for a specific commitment would be determined by the type of unit, the reaction time and the skills needed. If we are to rely to a greater degree on the Reserves to augment the Regular Force, the size of the Reserves will have to be significantly increased and their training and equipment substantially improved....

The opening phase of Reserve modernisation is already underway and will be pursued with vigour. It will greatly improve the equipment and training of the Primary Reserve. We will then be better able to fulfil many of our high-priority commitments, including maritime and NORAD operations in Canada and land and air missions in Europe. In the longer term, it will be necessary to implement a complete Reserve Force Development Plan. As a result, Reserve strength will increase to about 90,000. The revitalisation of our Reserves will contribute enormously to our ability to meet fully and effectively all our military commitments. The Government recognises the value of retaining Reserve units in their traditional locales and will make every effort to do so.

Reserve expansion will require a larger pool of trained officers. For this reason, we will study the reactivation of university training programs like those which existed before 1970, the Canadian Officers' Training Plan, the University Reserve Training Plan and the University Naval Training Divisions.

In order to achieve these objectives, pay and benefits will have to be improved. Resources to increase Reserve recruiting will also be required. Terms and conditions of service must be altered to make it easier for members to serve and employers will be encouraged to support Reserve service by members of their work force.

The Canadian Forces must have a highly motivated, well-trained, properly equipped Reserve to be able to meet Canada's defence commitments and to provide a base for expansion whenever that may be required.

Looking beyond the words of the politicians, perhaps the best way to measure the determination to rebuild the Reserve is by using the same yardstick we used to measure its decline - their numbers in relation to the Regular Force.

The Canadian Army (Force Mobile Command/Land Forces Command)

	Regular	Reserve
1971	20,000	18,000
1972	20,000	15,775
1973	18,000	14,428
1974	18,839	14,217
1975	17,551	15,200
1976	17,700	15,700
1977	17,856	16,165
1978	16,917	15,500
1979	16,225	16,595
1980	17,034	15,500
1981	16,000	14,586
1982	17,636	15,500
1983	17,900	16,000
1984	18,338	16,000
1985	17,883	17,445
1986	18,436	16,221
1987	14,185	16,000
1988	14,339	17,004
1989	14,511	18,768
1990	14,308	20,105
1991	14,087	22,455
1992	14,297	25,540
1993	13,791	22,134
1994	13,619	25,524

Table 2-2: Relative Strength of Regular and Reserve Forces - Excluding Civilians
Source: Department of National Defence

2.5 The Canadian Army Today

Since the end of The Second World War, The Canadian Forces has devoted most of its resources to maintaining the operational readiness of the Regular Force. With the demise of the Warsaw Pact, this approach is being replaced by a more balanced one based on the increased integration of a smaller Regular Force and a revitalised Reserve Force. This policy is known as the Total Force concept.

In 1992, government policy called for the reduction of the strength of the Regular Force (including civilians) from 23,500 to 20,500 within three years. Broadly speaking, these reductions were achieved by bringing 1 Canadian Brigade Group home from Germany and disbanding it. Lost were approximately three Infantry Battalions, three Armoured squadrons, one Air Defence Regiment and one Field Artillery Regiment. Regular Force personnel were offered sizeable severance packages to encourage them to leave the service. At the same time, the government announced that the Reserve Force was to grow from 21,500 to 29,000 (including civilians) over a similar period.

The plans described above were announced during the heady days after the fall of the Berlin Wall when serious commentators were speaking of a 'peace dividend'. Unfortunately, the real world did not co-operate with the forecasters. No sooner had the cutbacks to the Regular Force been completed than events in Yugoslavia and Somalia compelled the deployment of large numbers of troops to those areas. Even with the cancellation of the long-standing Canadian peacekeeping commitment to Cyprus, the total number of peacekeepers had increased substantially. The reduction of the size of the Regular Force, coupled with these growing peacekeeping commitments, forced the accelerated implementation of Total Force. The remainder of this section will introduce some of the changes that this process has occasioned. (The issues introduced here will be dealt with in much greater detail in Chapters 3 and 7. Limited detail will be given here for the sake of continuity.)

With the advent of Total Force, the command and control relationships in the Army have been rationalised. Prior to 1988, the Regular Force units in Canada were divided into three Brigade sized groups while bases, training facilities and schools reported directly to Force Mobile Command Headquarters (Army HQ). The Reserve meanwhile, was organised into five Areas which also reported directly to FMC HQ. In 1988 the entire Army was reorganised along geographical lines. Four 'Area' Commands were created, each encompassing all of the land forces within those areas, including both the Regular and the Reserve Forces. As a result the Regular and Reserve Forces became merged for command and control purposes at a much lower level than had previously been the case. The intent was to foster increased co-operation between the Regular and Reserve Forces and to facilitate joint training at the local level.

Perhaps, the most significant impact of Total Force is on the manner in which manpower is raised and allocated

throughout the system.

For many years each Reserve unit had attached to it a small Regular Force cadre called the Regular Support Staff. Typically, this included: a Warrant Officer, who worked in the training office; a Sergeant, who supervised the orderly room; a Master Corporal, who carried out routine administration; and a Captain who oversaw unit administration and supervised the work of these others. These four formed the core of the Regular Support Staff or 'RSS'. While these Regular soldiers were 'attached' to a Reserve unit, and were responsible to the Commanding Officer on a daily basis, they actually reported through a separate Regular Force chain of command.

With the implementation of Total Force the RSS system was phased out. As of September 1992, the Regular Force members who were attached to work with the Reserve became full members of the unit to which they were sent. They were to hold operational positions, receive orders through the normal chain of command and depend on the Commanding Officer for their personnel evaluations. The only difference between them and their Reserve counterparts was to be that they work full time rather than part time.

Accompanying this change, is an increase in the number of Regular Force members who are attached to work with the Reserve. A number of Reserve units have been selected to become '10/90 units' in which fully 10% of the members of the units will be Regular Force.

The reduction of the Regular Force has necessitated an increase in the number of Reservists who are called upon to augment Regular units tasked to operational deployments. The practice of offering these call outs to Reservists is nothing new. What has changed dramatically is the number of call outs available and the extent to which the Regular Force depends on

the Reserve to provide them with this manpower.

The changes outlined in the above paragraphs represent only the first halting steps toward the implementation of the Total Force concept. It is important to recognise that these changes are made possible by improvements in the geopolitical situation but they are driven by fiscal realities.

The likelihood of Canada being involved in a conflict may be as great now as it was at the height of the Cold War, however, it is now much more likely that such a conflict would be regional in scope rather than global and would be limited to peacekeeping or low intensity warfare. As a result, it is much more likely that a middle-power like Canada would have some time available for preparation and training prior to deployment. In such a scenario Reserve soldiers are a much more viable option.

This chapter has been offered primarily to illustrate one fact; that while the Regular Force has been the dominant component of the Canadian Army since the World War II, in the broader sweep of history, this has been the exception and not the rule. During most of her history, Canada's defence needs were met through the voluntary contributions of Reservists, who contributed to their country both as citizens and as soldiers. These part time soldiers formed the backbone of the Canadian Army in two World Wars and were not found wanting. It is time to reconsider what contribution Reservists could make to the defence of their country in current circumstances.

CHAPTER III

INITIAL EXPERIENCE OF TOTAL FORCE

3.1 Introduction and Methodology

There have been two distinct attempts to integrate Regular soldiers into Reserve units and thus create Total Force units. One was undertaken in selected Reserve Regiments of the Royal Canadian Artillery between 1992 and 1994. The other was undertaken in selected Reserve Infantry Battalions beginning in 1994 and was still in progress at the time of writing.

Several requests have been made for the official analysis of each of these efforts. Officials at National Defence Headquarters and at Land Forces Command (formerly Force Mobile Command) Headquarters have stated that no such analysis has been undertaken. This section represents an attempt to rectify that omission.

Consideration was given to the question of whether this research should take the form of a written survey or a series of interviews. The latter course was adopted for a number of reasons. The writer was concerned that his own experience in one of the Total Force Artillery Regiments might cause a subtle bias in the design of any written survey. The main concern was that survey questions might unintentionally focus on those issues which had been important in his unit while ignoring issues which had been important in other units but not his own. It was felt that the interview technique would be preferable because it would best permit subjects to state their own points of view on issues not raised by the researcher. It was felt, further, that this research was essentially exploratory in nature and that information discovered in one interview might well be used to uncover still more in the next. This type

of continuing investigative process is impossible using a single written survey prepared in advance.

Practical considerations also played a part in the decision to use the interview format. Some of the units which the author wanted to contact were located at quite some distance (up to 3000 km) and funds were not available for travel. Telephone interviews with a fairly small number of subjects were seen as being easier to undertake than an attempt to organise the administration of written surveys when it would have been impossible to be present personally.

Interviews were conducted with members of the six Artillery Regiments across the country which participated in the Total Force experiment and the five Infantry Battalions which formed the Total Force Infantry Battalion in British Columbia. As mentioned above, many of these interviews were conducted by telephone. An attempt was made to interview at least one Regular and one Reserve officer and at least one Regular and one Reserve NCO from each unit. This was possible in most cases. Interviews with junior NCOs were undertaken when convenient but these were not always easy to arrange and, because of their more limited experience, their insights generally proved less instructive. In total, over 40 interviews were conducted with Regular and Reserve officers and NCOs.

An interview guide was prepared which included questions on the following: attitudes of Regular and Reserve soldiers at the beginning of the implementation of Total Force; the organisational structure of the unit before and after the implementation of Total Force; effects of Total Force on operational efficiency; effects of Total Force on training schedules; effects of Total Force on mess life; attitudes of Regular and Reserve soldiers after one or two years of Total Force. While all of these questions were raised in each interview, the interviews themselves were only semi-structured

and seldom followed the prescribed format. The intention was to allow subjects to develop their own themes and to speak freely about those aspects of the Total Force experience which they themselves thought was important.

Confidentiality was important to many of the individuals interviewed. For this reason, all personnel who agreed to be interviewed were assured of anonymity. As a result, the individuals whose opinions are quoted in this section will be identified only by their rank and whether they are members of the Regular or Reserve Force. Further information identifying these individuals will not be provided in this document.

All interviews with personnel in the Total Force Artillery Regiments were conducted during September and October of 1994. The bulk of the interviews with personnel in the Total Force Infantry Battalions were conducted in November 1994, however, some additional interviews were also undertaken over the next eighteen months.

It should be noted that the author felt, by the end of the research, that the decision to use the interview format had been fully justified. Many of the more interesting and important findings came as somewhat of a surprise. It is felt that questions on these issues would not have been asked on a written survey and thus research in that format would not have elicited this information.

3.2 Royal Canadian Artillery

In 1992, the Royal Canadian Artillery became the first arm to take serious steps toward the building of Total Force. During that year, budgetary cutbacks caused a number of Regular Force units to be disbanded including one of the four Regular Artillery Regiments. Financial incentives were offered to encourage members to accept early retirement but the

Regular Force still found itself with more artillery officers and NCOs than it could usefully employ. The decision was taken to use these surplus members to bolster the Reserve. As a result, six Reserve Artillery Regiments were designated to become the first Total Force units.

Under the plan which was developed, each Total Force unit was to have approximately 12 additional Regular soldiers attached to it. Just as importantly, rules were eliminated which had previously restricted Commanding Officers to using their Regular members in an advisory capacity only. Henceforth, COs would be free to employ their Regular soldiers in any manner they saw fit.

This experiment was the first of its kind in Canada. Surprisingly, Commanding Officers were given little direction with regard to what they were expected to achieve or how they were expected to achieve it. Individual units simply adopted their own strategies for integrating Regular and Reserve soldiers. This section is an attempt to categorise and analyse the experiences of these units in an effort to determine which strategies seemed to deliver optimal results.

Organisational Structure

The Regular Force cadre in a Total Force unit consisted of between 7 and 14 soldiers. A typical unit might include two Captains, two Warrant Officers, four Sergeants and four Corporal/Master Corporals. (It should be noted that two of the six Total Force units were commanded by Regular Lieutenant-Colonels).

Following are two line diagrams which show the organisational structure adopted at 15 Field Regiment, RCA both before and after the implementation of Total Force. In both cases only major command and staff positions are shown.

Positions held by Regular Force soldiers are denoted by showing the rank of the individual holding the position. Where a Regular soldier fills a number of positions on a part time basis, this is denoted by the rank of the individual followed by (pt). Positions held by Reservists working on a full time basis are denoted by showing the rank of the individual holding the position followed by (res). The remainder of the positions were held by Reservists.

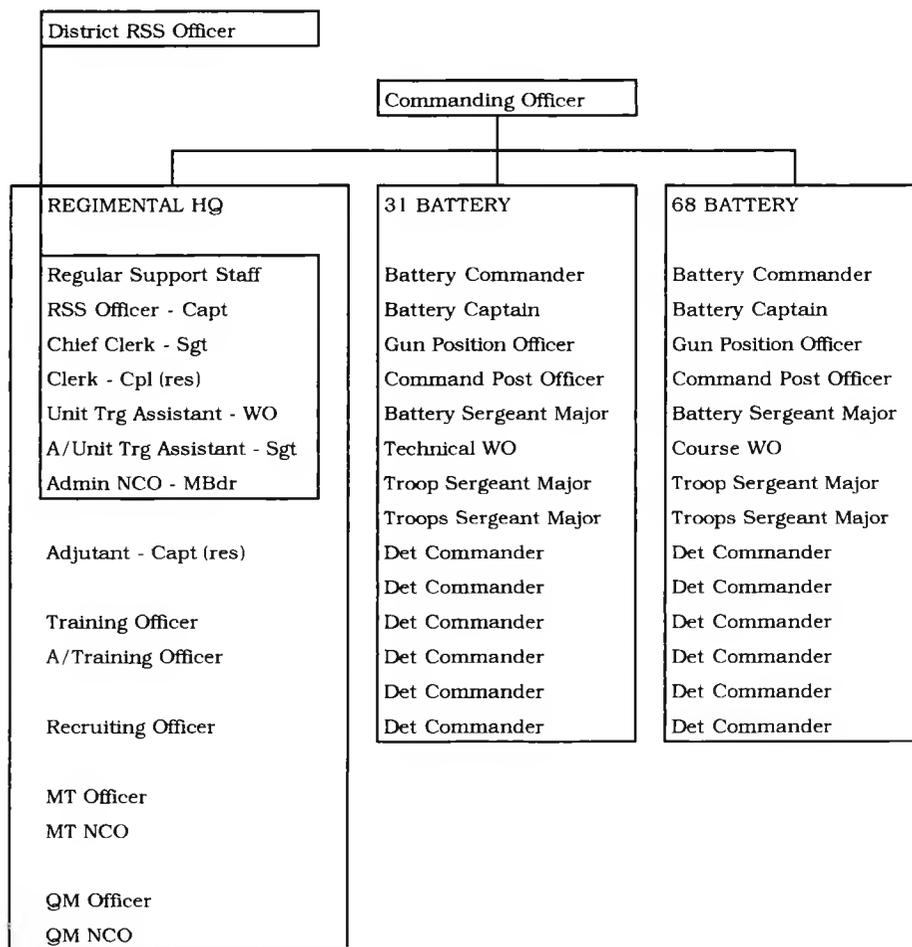


Figure 3-1: Organization Chart - 15 Field Regiment, RCA - July 1992 - Before Total Force

Figure 3-1 shows the organisational structure of 15 Field Regiment before the implementation of Total Force. As can be seen, under the old Regular Support Staff system, Regular soldiers were grouped together and held administrative and staff positions. The RSS officer reported both to the Senior RSS

officer in the District and to the Commanding Officer of the unit. Under this system, the RSS were supposed to advise only and were never to do work which could have been done by a Reservist.

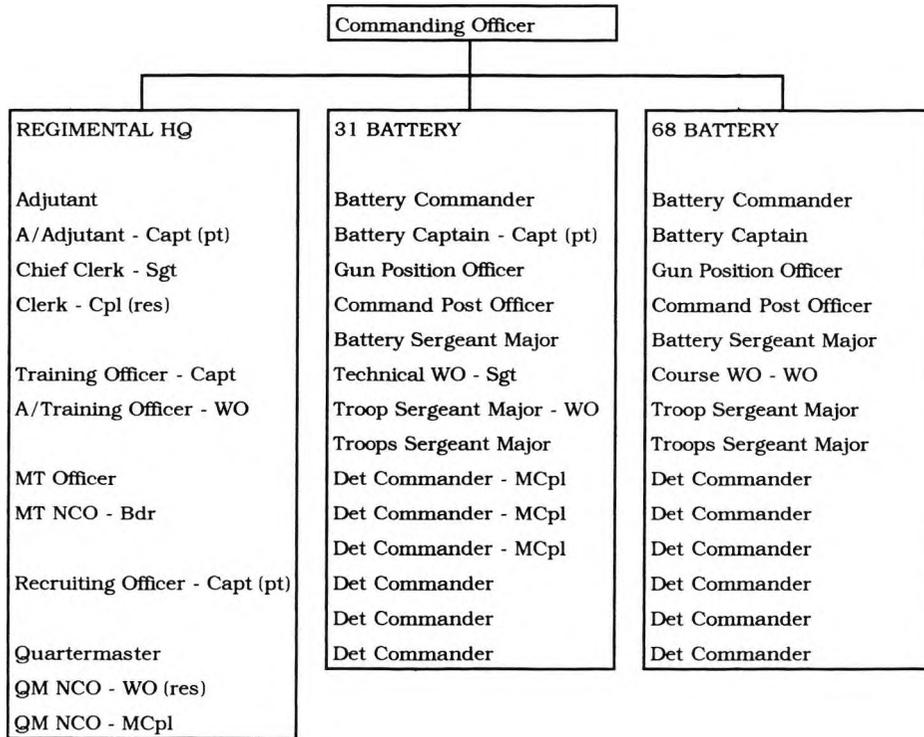


Figure 3-2: Organization Chart - 15 Field Regiment, RCA - Sept 1992 - After Total Force

Figure 3-2 shows the organisation of 15 Field Regiment after the implementation of Total Force. Under the new Total Force system, Regular soldiers could hold line positions and could be tasked with any work deemed appropriate by the CO. How to employ the Regular Force cadre was probably the most important decision that any Total Force Commanding Officer was called upon to make.

A surprising degree of consensus arose with regard to the employment of the Regular officers. Most units employed one Captain as Adjutant and the other as Regimental Command Post Officer (training officer). Both of these positions involve dealing with large volumes of paperwork and thus require a

sound knowledge of staff procedures. Both positions require a great deal of liaison with higher headquarters, much of which must be done during 'office hours'. And both positions entail a quantity of work which can easily occupy 40 hours per week. These positions were therefore viewed, almost unanimously, as being perfectly suited to a Regular officer.

At the NCO level less consensus arose. All units employed a Warrant Officer in the training office, where he would assist with the detailed planning and organisation of training and exercises. The arguments for employing a Regular soldier in this position are similar to those advanced above for employing a Regular officer as adjutant or training officer.

The employment of the remainder of the Regular cadre tended to reflect the philosophy of the individual Commanding Officer with respect to the mission of the Reserve and the role of the Regular soldier within a Total Force unit. Two distinct and opposing philosophies emerged.

A number of Commanding Officers implicitly adopted as their mission 'to achieve the maximum operational efficiency in the shortest possible period of time'. These COs tended to place Regular Force personnel directly into the most important line positions. These positions included Gun Position Officer, Troop Sergeant Major, Command Post Technical Warrant Officer and Detachment Commander. In many cases this meant that qualified Reservists lost the opportunity to fill these positions.

Other Commanding Officers implicitly decided that their mission was first and foremost 'to train Reservists' and that Regulars should only hold positions which would facilitate this. In these units, efforts were made to ensure that line positions went to Reservists wherever possible. Regulars were put into administrative and training positions in garrison and were placed in line positions in the field only if there were no trained

Reservist available.

The approaches adopted at the various units can best be described as falling along a continuum but basically, three units adopted the first philosophy described above and three adopted the second.

Operational Efficiency

By common agreement the Total Force experiment resulted in a clear and unambiguous improvement in the operational efficiency of the units involved. In garrison, administration and training was conducted more efficiently. In the field, deployments were quicker, response to calls for fire were answered more rapidly and accuracy was improved. Most of the Reservists interviewed stated that they had never seen their units so technically proficient.

However, the philosophy which the commanding officer adopted regarding the employment of the Regular cadre tended to have an important effect on the manner in which these improvements were realised. Units which, whenever possible, placed Reservists into line positions tended to improve only gradually as those individuals learned and grew into their jobs. On the other hand, units which placed Regular Force personnel directly into the most important line positions found that their operational efficiency improved right from the outset. Initial comparisons would have suggested that the latter course was the more expedient.

By the summer of 1994, however, when the Total Force experiment came to an end and the Regular cadres were posted back to Regular Force units, the longer term ramifications of these two approaches became more apparent. Units which made a practice of placing Reservists into line positions maintained the improvements which they had made. Soldiers

retained the knowledge they had gained from working with the Regular Force cadre and the forward momentum of these units continued apace. Units which followed the practice of placing Regular soldiers into line positions saw the improvements they had made evaporate as the Regular soldiers were posted out. Often, they also discovered that many Reservists, denied the opportunity to perform in the positions for which they had been trained, had found other outlets for their energies, or had become rusty, or had quit the unit altogether.

In short, the evidence suggests that units which made a practice of placing Reservists into key line positions found themselves stronger after Total Force than they had been before it. Units which had aggressively placed Regular soldiers into line positions found themselves weaker after Total Force than they had been before it.

Training and Courses

All units reported that the presence of the Regular cadre allowed them to run more courses than they had in the past. Just as importantly, these courses were perceived as being of much higher quality. One unit reported that it conducted twice as many courses as it would have normally. All agreed that having these courses running during the year gave the units a sense of momentum and a sense of urgency which contributed to the overall tempo and morale of the unit.

Obstacles to Success

Regular and Reserve members of Total Force units agreed unanimously that the Total Force experiment had been a success. However, they were equally unanimous that these results had come only at the end of a long and difficult period during which many obstacles and difficulties had been encountered. We will examine a number of these.

The first obstacle to the successful implementation of Total Force was the attitudes of the participants themselves. Reservists in general met Total Force with an attitude of optimistic apprehension. On one hand, they hoped Total Force meant the Reserve would finally be taken seriously. On the other hand, there was a deep suspicion that Total Force might eventually mean Reserve units would be commanded and run by Regular officers and NCOs with Reservists providing only the raw manpower.

Regular attitudes varied by rank. Most officers were enthusiastic and looked forward to what they perceived as an opportunity to make a real contribution. Junior NCOs were happy to have escaped from the confining environment of a Regular Force base and accepted the posting in good spirit. The Senior NCOs however, were generally dissatisfied with their postings. Traditionally, attachment to the Reserve had been an NCOs last posting prior to retirement. Despite the assurances of career managers, many younger senior NCOs felt that service in a Reserve unit was a dead-end which would harm their prospects for advancement.

Dealing with Regular and Reserve attitudes was a crucial first step in the implementation of Total Force. The decision as to whether Regular soldiers would be placed directly into key line positions was the primary determinant as to whether Reserve fears were relieved or realised. In those units in which Reservists were accorded the first right to line positions their initial concerns were eased and they became enthusiastic participants in the Total Force experiment. In those units in which large numbers of Reservists were replaced by Regular soldiers their worst fears were confirmed and in many cases they lost their commitment to the process.

Convincing Regular members that they could have a positive impact was also important. However, in most cases,

they were less preoccupied with the position they received than the effect that their posting would have on their personnel evaluation ratings. Their eligibility for courses, promotions and even continued service was dependent on this score. Knowing that they would receive scores which were comparable or favourable to those they would have received in a Regular unit was of much greater importance to Regular soldiers than the particular position they were asked to fill. In fact, few Regular soldiers expressed any particular enthusiasm for taking on a line position within a Reserve unit.

A second obstacle to the implementation of Total Force was the interpersonal relations between the participants themselves. Reservists had long believed that Regulars looked down on them and denigrated their commitment, professionalism, and competence. Reservists were therefore hypersensitive to any example of what they perceived as Regular Force arrogance. These did not materialise at the officer level and relations between Reserve and Regular officers soon became cordial and even friendly. The integration of the junior NCOs likewise proved to be no problem. Relations between Regular and Reserve Senior NCOs, however, were strained from the start, and in most cases only deteriorated from there. The disparity between the experience and expertise of Regular and Reserve senior NCOs was evident to all. And in most cases, Regular senior NCOs lacked the subtlety to offer their assistance without offending while Reserve senior NCOs lacked the maturity to take criticism in good spirit. The result tended to be a poisoned atmosphere where Regular and Reserve NCOs viewed each other with hostility.

A third obstacle to the implementation of Total Force was that of reaching a mutual understanding as to the terms of Reserve service. Most Regular soldiers found their initial experience working with the Reserve to be frustrating. Training would be organised and yet many soldiers would not show up to

undergo it. Soldiers would be nominated onto courses only to withdraw at the last minute. NCOs and officers would agree to teach a portion of a course only to renege on their commitment later. Regular soldiers saw these Reserve behaviours as unprofessional; and sometimes they were correct. However, often they were just symptomatic of the fact that the Reservist has to juggle conflicting obligations at home, work, school, and the Army.

The behaviour of a Regular NCO toward Reservists was determined to a great extent by his understanding of the reality that Reservists have competing commitments. By the end of the Total Force experiment many Regular soldiers had come to understand and appreciate the very real sacrifices that Reservists make in order to attend training. Others never did.

A fourth obstacle to the implementation of Total Force was the division of labour between Regular and Reserve soldiers. In the past, much routine maintenance in Reserve units had been carried out by Reserve Privates and Corporals who would be called in to work during the day on a casual basis. Upon the arrival of the Regular Force cadre much of this work was instead left for them to contend with. Neither Regulars nor Reservists were satisfied with this situation. Regular Sergeants and Master Corporals found themselves doing menial work and felt their talents were being wasted. Meanwhile Reserve Privates and Corporals regretted the end of what had always been a reliable opportunity for short-term employment. This seemingly minor point had a real effect on the attitudes of both Regular and Reserve soldiers. On a practical level, it should be pointed out that it is not cost effective to post Regular Sergeants into Reserve units to do work which had previously been done by Reserve Privates.

A fifth obstacle to the implementation of Total Force was the asymmetry of time and resources available to Reservists

and Regular soldiers. This led inevitably to a sort of two-speed unit in which Regular soldiers could get things done much more quickly than could Reservists. In many cases this led to Regular soldiers taking the initiative and tackling problems during the day which would otherwise have been handled by Reservists. One Reserve officer stated, "The only reason I paraded was to find out which Regular soldier has done my job and to see if he had done it well". This is typical of many comments about how Regular soldiers usurped authority simply on the basis of having more time. While this type of initiative is normally laudable, in this case it had a dispiriting effect on Reservists who were keenly aware that they were not able to do as good a job in the time available to them as Regulars were able to do.

A sixth obstacle to the implementation of Total Force was the need to integrate Regular and Reserve soldiers into the same chain of command. The effective supervision of Regular soldiers, who worked full time, by Reservists, who worked part time, proved to be problematic. In addition, Regular soldiers often held multiple responsibilities, and were responsible to more than one supervisor, which made it difficult to assess their performance. In practice a 'de facto' chain of command for the Regular Force tended to develop regardless of where these personnel fell in the formal chain of command. In some cases Reservists found that Regular soldiers often seemed more concerned with pleasing the Regular Force personnel who outranked them than they were with carrying out the orders of the Reservist to whom they actually reported. This problem was less severe in those units which placed the Regular personnel primarily in administrative, maintenance, and staff jobs. In those cases, the 'de facto' chain of command was more likely to be the same as the formal chain of command.

Lessons Learned

The difficulties outlined above were present to some extent in each Total Force unit. However, the extent to which they were overcome varied from unit to unit. The philosophy which the unit adopted, in terms of placing Regular or Reserve soldiers into key line positions, seems to have played an important role in this regard. Quite simply, the entire Total Force experience appears to have been happier in units in which Reservists were given priority in terms of line positions and Regular soldiers undertook primarily a support role and concentrated on administration, maintenance and training. In these units the increases in operational efficiency came slower but they were more broadly based and permanent. Interestingly, both Reserve and Regular soldiers seem to have been more satisfied under this system. Significantly, units which followed this approach tended to be larger after the Total Force experiment than they had been before it, while those units which followed the alternative approach tended to lose personnel overall.

It would be wrong if this analysis were taken as an implied criticism of those units which chose to put Regular soldiers into line positions. To the contrary, in the absence of any concrete direction, these units simply made different assumptions about their mission and acted accordingly. This variety of experience is what allows us to make some tentative suggestions as to how Total Force should be structured in the future.

The tentative conclusion which this work suggests is that during peacetime, Regular cadres should be confined, whenever possible, to fulfilling administrative, maintenance, and training roles in Reserve units. Line positions should go to Reservists whenever possible and Regular soldiers would be tasked to these only when there are no trained Reservists available. This would

permit the greatest number of Reservists to achieve the highest possible level of training and create the broadest possible base of knowledge and expertise to build upon. Upon mobilisation, however, either for war or for a UN tasking, this policy would be relaxed and the Regular cadre would be integrated directly into the unit as operational requirements dictate. This would allow units to achieve, at that time, the type of one-time increase in operational efficiency that this makes possible.

Only by constructing Total Force along the lines indicated above can we truly take advantage of the strengths of both the Regular and Reserve Forces.

Aftermath

The Total Force experiment in the artillery came to an end in the summer of 1994. By that time the cutbacks in the Regular Force had been fully phased in and the surplus of Regular personnel had given way to shortages. The Regular cadres which had been posted to Total Force units were again needed in Regular units and were given their posting messages. Total Force units were redesignated as Reserve units and retained only the small complement of Regular Force personnel to which they were therefore entitled.

3.3 The Total Force Infantry Battalions

During the Spring of 1994, even as the Regular Force cadre was being removed from the Total Force Artillery Regiments, orders were going out for the creation of several Total Force Infantry Battalions. At that time, the Regular Force contained three Infantry Regiments, The Princess Patricia's Canadian Light Infantry, The Royal Canadian Regiment, and the Royal 22nd Regiment, each of which consisted of three Battalions. Another round of cutbacks had made it impossible to maintain all nine Battalions at full

strength but operational commitments remained unchanged. Ten years earlier, the defence planners would have recognised only two options - a reduction in the number of units or a reduction of the number of soldiers in each unit. By the mid 1990's they recognised a third option - greater reliance on the Reserve.

The decision was made to maintain two of the three Battalions in each Regiment at full strength while turning the third into a Total Force Battalion. These Total Force Infantry Battalions would have a skeleton staff of approximately 10 percent Regular soldiers with 90 percent of the personnel being provided by four Reserve Infantry Battalions. Based on the mix of Regular and Reserve soldiers these Total Force Infantry Battalions were to be known as 10/90 Battalions.

The objective of this effort was to maintain the third Battalion of each Regular Regiment as an active unit and keep it from being closed. It was accepted that these 10/90 Battalions would not be as operationally effective as a Regular unit. However, they were expected to be more operationally effective than an ordinary Reserve unit. In other words, the goal was to achieve as close as possible to Regular Force proficiency using Reserve personnel and Reserve budgets.

Organisational Structure

In British Columbia District, 3 PPCLI was the Regular Force unit tasked to form the nucleus of a 10/90 Battalion. It was to be supported by four Reserve Infantry Battalions: The Canadian Scottish Regiment, The Seaforth Highlanders of Canada, The Royal Westminster Regiment, and the Rocky Mountain Rangers.

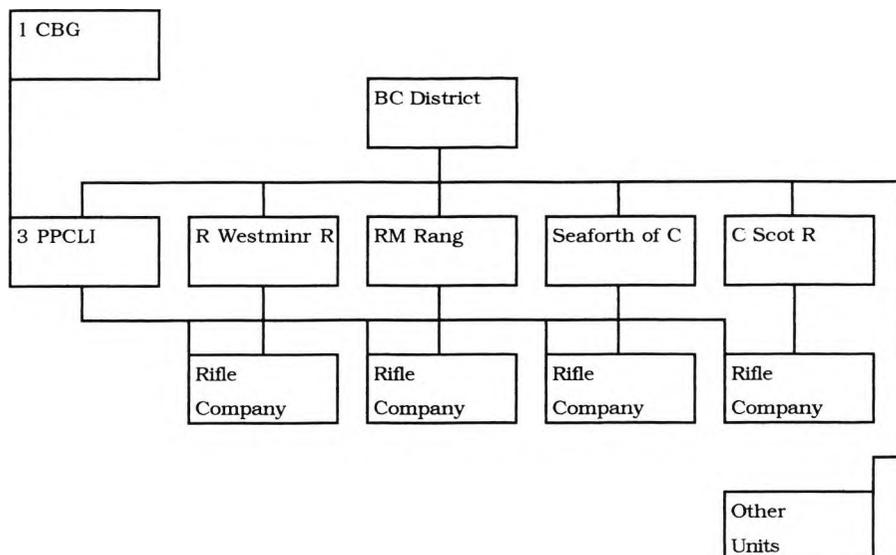
Of the 82 Regular soldiers who remained in 3 PPCLI, approximately 14 would work in the Battalion HQ and 42 would

work in the administration company. Between 6 and 10 Regular officers and NCOs would be attached to each of the four Reserve units.

Each of the Reserve units assigned to work with 3 PPCLI was tasked to provide a rifle company plus elements of a combat support company. Units were tasked as follows: The Canadian Scottish Regiment was to supply one rifle company and a pioneer platoon, the Seaforth Highlanders of Canada was to supply one rifle company and a mortar platoon, the Royal Westminster Regiment was to supply one rifle company and an anti-armour platoon, and the Rocky Mountain Rangers was to supply one rifle company and a reconnaissance platoon. At full strength each of these rifle companies would consist of 131 officers and soldiers. The various weapons platoons would be approximately one-third that size.

The Commanding Officers of the Reserve units were given clear instructions with regard to the employment of the Regular Force cadre assigned to them. They were directed that all of these personnel were to be placed in either the rifle company or the combat support platoon and that they were to be placed in line positions. In other words, they were directed to follow exactly the course which had generated the worst results during the Total Force experiment in the artillery.

Following is a line diagram which shows the organisational structure (to the sub-unit level) of the 10/90 Battalion based on 3 PPCLI as it relates to BC District and other higher headquarters.



Legend:

- 1CBG = First Canadian Brigade Group
- 3PPCLI = Third Battalion Princess Patricia's Canadian Light Infantry
- R Westminr R = Royal Westminster Regiment
- R M Rang = Rocky Mountain Regiment
- Seaforth of C = Seaforth Highlanders of Canada
- C Scot R = Canadian Scottish Regiment

Figure 3-3: British Columbia District Total Force Infantry Battalion - Sept 1994

In each of the four infantry companies, well over half of the key line positions were assigned to Regular soldiers. Line positions held by Regular soldiers in the 10/90 Reserve units included one company commander, four company second-in-commands, three company sergeant majors, six platoon warrant officers and four combat support platoon commanders. In most cases, these appointments caused the displacement of qualified Reservists.

The command and control relationship between these various organisations was complicated to say the least. An officer commanding a rifle company was to report to the Commanding Officer of his Reserve unit on some matters and to the Commanding Officer of the 10/90 Battalion on other matters. A commander of a weapons platoon similarly reported

through two chains of command. In discussions with commanders of the various rifle companies, it became clear that they were not sure which Commanding Officer had authority in which areas. This ambiguity was also carried one step higher with Reserve Commanding Officers taking their primary direction from the District Commander while simultaneously accepting direction from the Commander of the 10/90 Battalion.

Training and Courses

Two of the four Reserve infantry units involved in the Total Force experiment in British Columbia reported large improvements in their quality of training while the other two reported no major change.

Obstacles to Success

The main obstacle to the success of this Total Force experiment seemed to be the same one which bedevilled the artillery two years earlier. Little consideration was given to the human factors which are so important in a Reserve unit. Large numbers of Reservists were fired and replaced with Regular soldiers who attempted to impose their standards and attitudes on an organisation which already had its own. All of this with predictable results.

According to one Reserve infantry officer, "In the Regular Force the soldiers are basically prisoners and you can do what you want with them. In the Reserve they are not prisoners and they can always vote with their feet. And that is what many are doing."

By and large, the difficulties encountered in the Total Force infantry units mirror those which had troubled the Total Force artillery units. Two obstacles, however, arose which did

not have a parallel within the artillery.

One problem which had no parallel with the artillery experience was the 'hat badge' issue. In the artillery, all gunners, Regular and Reserve, are part of a single Regiment; The Royal Regiment of Canadian Artillery; and they all wear the same hat badge. For practical reasons the artillery takes pride in continuously striving toward a greater degree of standardisation both within units and between them. As a result, gunners can usually transfer from one unit to another with minimal disruption. This is not true in the infantry where each Regiment has its own history, of which it is often justifiably proud, and its own traditions and idiosyncrasies which, while sometimes bewildering to the outsider, are often extremely important to the members of that unit. The Seaforth Highlanders of Canada, for example, earned battle honours at Ypres, The Somme, Vimy, and Passchendaele during World War I and Sicily, Ortona, The Hitler Line, The Gothic Line and Northwest Europe during the World War II. This highland unit has as proud a record in wartime as any Regular Force unit and is typical of Canadian Reserve units.

Hence, the 'hat badge' issue. Would the soldiers of each of the Reserve units rebadge and become members of the PPCLI? Or would the Regular cadre posted to a Reserve unit rebadge and become members of the unit to which they were attached? Or would the members of each organisation simply retain their own insignia regardless of where they were sent or attached? The latter of these three courses of action was viewed as the least painful and was eventually adopted. However, even this solution had important negative side effects, not the least being the creation of a visible 'us and them' mentality. As a Reserve officer in one of the Total Force Infantry Battalions remarked,

"What kind of message are you giving your soldiers when they see their own warrant officers being shunted aside in favour of outsiders? The only message they can take is

that their unit is not very good. And then to what do they have to aspire? To become a warrant officer in a Reserve unit which is not very good so they can be shunted aside in favour of a Regular soldier?"

Other symbols have also turned out to have real significance. Each of the rifle companies within the 10/90 Battalion were redesignated. For example A company of the Canadian Scottish Regiment became E company of 3 PPCLI. For many soldiers, some of whom had spent 20 years as members of a certain company, this was a nontrivial event and their anger and frustration as they watched newcomers pulling "our insignia down off of our walls" is understandable. Other traditions fell victim as well. One unit with an outlying company had long turned a blind eye to the operation of an unauthorised mess in that company's location. Relatively common in the Reserve, this is viewed as a major infraction in the Regular Force and shortly after their arrival the Regular cadre closed it down. Fifteen Reservists quit the next day.

Another issue which had no parallel with the artillery experience was the issue of extra-unit chain of command. The Commander of 3 PPCLI decided to hold weekly 'administrative meetings' with the companies under his command. At these meetings he would pass on various types of information, both administrative and operational. In any other situation these 'meetings' would have been called Orders Groups. However, these 'meetings' were held during the day and as a result they were attended not by the officer commanding each of the companies but rather by the senior Regular officer in each company. This Regular 'chain of command' while functional and perhaps even necessary, caused a severe stress on the real chain of command which was circumvented as a result.

Lessons Being Learned

As of the writing of this section, the infantry experiment

with Total Force is a little more than a year old. Therefore, it is probably premature to speak of the success or failure of the attempt. However, certain trends are already apparent.

The Total Force Infantry Battalions are suffering massive attrition. Officers and NCOs of long standing are leaving the Reserve or are absenting themselves from training for extended periods. This trend is most marked at the Senior NCO level. This fact is being exacerbated by indifferent recruiting results.

Regulars are assuming greater day to day control over all facets of unit operations. Training quality is high except fewer soldiers are turning out to undertake it. Regular soldiers berate those who do turn up for their lack of commitment. Reservists, rather than fight the Regulars to retain control, take time off to explore other interests.

Eventually, this drama will likely play itself out the same way it did in the artillery. Low turn outs on annual exercises will convince the defence planners that the Total Force concept is not viable. Further cutbacks and normal attrition will create a shortage of Regular officers and NCOs in the remaining Regular Battalions. The Regular Force cadre will be removed from Reserve units and sent back to the Regular Force. To preserve reputations, it will be declared that this Total Force experiment was a success but the matter will not be investigated closely. Finally, the Reserve officers and NCO's who remain will pick up the pieces in what is left of the Reserve units which had formed the 10/90 Battalions.

3.4 The Next Step

Fiscal realities dictate that The Canadian Army must look to the Reserve in order to maintain operational capability within reduced budgets. And operational requirements dictate that a higher level of training be achieved by Reserve units than

they have typically attained in the past. This probably means that Reserve units will need to integrate Regular Force soldiers who can provide them with the experience and knowledge that they lack. Some form of Total Force is inevitable.

Thus far, the Canadian Forces have not yet found a workable formula for Total Force. The remainder of this thesis is essentially a search for that formula.

CHAPTER IV

REVIEW OF THE LITERATURE

4.1 Introduction

This thesis will explore how Canada can best use the Regular and Reserve Forces to construct an operational Total Force. As has been foreshadowed in the previous chapters, success in the military organisation depends upon a complex web of factors including individual skills and motivation, group solidarity and morale, training, leadership, and the momentum of past success. In this chapter we will attempt to unravel this web in an attempt to come to an understanding of what contributes to excellence in the military setting.

We will begin by defining some terms which are relevant to any consideration of organisational performance. We will then examine certain methodological difficulties which hinder attempts to measure performance in the peacetime military organisation and we will describe how the military in Canada and in other countries have attempted to overcome these difficulties. We will examine a commonly used concept which appears to offer some advantages as a proxy for measuring performance in the peacetime military organisation. And we will describe how certain other factors effect this measure of performance and how the leader can use this knowledge to maximise the performance of his team. Finally, we will offer an overall theory which draws together all of these various elements into a single framework.

4.2 Performance Measurement in the Military

Productivity and Performance

Productivity is a measure of organisational performance

and is a function of both effectiveness and efficiency. These two terms will be defined here.

Efficiency is measured as a ratio of outputs to inputs. In the private sector, outputs include the manufacture of products or the delivery of services. Inputs are generally understood to include factors of production such as land, labour, equipment, capital and raw materials. Both inputs and outputs may be expressed either in terms of units or in terms of their monetary value. The potential number of such efficiency ratios is limited only by the needs and imagination of the person designing them and the quality and quantity of the information at his disposal.

Effectiveness is less quantifiable than efficiency and is not represented as a ratio. An organisation is effective if it achieves the goals it sets for itself and it is efficient if it does so at the lowest possible cost. Productivity is achieved when the organisation is both effective and efficient. This concept of productivity can also be referred to interchangeably as organisational performance.

Problems of Performance Measurement

In this section, we will examine certain methodological difficulties which hinder attempts to measure performance (effectiveness and efficiency) in public sector organisations in general and in peacetime military organisations in particular.

The production process in the private sector can be represented by the following schematic:

INPUTS → TRANSFORMATION → OUTPUTS

FIGURE 4-1: Production Process - Private Sector

Within the production process, efficiency measures the extent to which the maximum quantity of outputs are produced

with the minimum quantity of inputs, while effectiveness measures the extent to which the outputs conform to the required standards.

Determining the productivity of an organisation in the public sector is more difficult for two reasons. First, most public sector organisations do not exist to earn a profit. Instead, they exist to accomplish other public policy objectives, the value of which are often impossible to quantify. What is the monetary value of the delivery of health care to an indigent man or the delivery of free lunches to school children? What is the monetary value of the repair of a road or the provision of police services to a community? The cost of these goods and services can be determined but their value can only be estimated. Managers of public sector organisations thus suffer a marked handicap in that they must manage for efficiency without quantifiable information regarding the value of their outputs.

Second, the real 'output' of a public sector organisation is seldom the good or service that it actually delivers. Instead, the public organisation often provides the good or service only as a means to accomplish some other socially or politically desirable objective. Streets are cleaned so as to improve the image of a community. Youth programs are organised to decrease delinquency and truancy. Police patrols are conducted in order to reduce crime. None of these activities are valuable as a final product in the way that most private sector services are. They are valuable only in so far as they contribute to achieving some other desired goal. Any measurement of the effectiveness of a public organisation is therefore highly subjective.

The production process in the public sector can be represented by the following schematic:



FIGURE 4-2: Production Process - Public Sector

The production process in the public sector is similar to that in the private sector, except that the value of the outputs are uncertain and a fourth stage is added to the production process to show that most services which are provided by government are not final products in themselves but rather are designed to accomplish some other socially desirable goal.

Productivity measurement in the military is fraught with many of the same difficulties faced by other public sector organisations. However, the military organisation also suffers, over long periods, from an even more severe dearth of useful information. The reason for this is simple. The ultimate performance measure for a military organisation is battle and that, for most armies, is experienced only infrequently.

The production process for the military organisation can be represented by the following schematic:

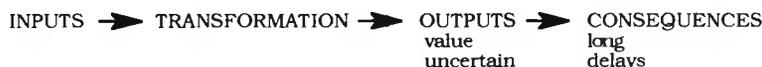


FIGURE 4-3: Production Process - Military

The production process in the military is similar to that of any public sector organisation except that the consequences (victory or defeat) are known only on an unpredictable and irregular schedule.

The evaluation of productivity in the military is thus rendered difficult as a result of two factors. First, by the fact that the military is a part of the public sector and, as a result, costs can not be related to any notion of profit. And second, by the infrequency with which the military performs its primary

mission.

Performance Measurement in The Canadian and Other Armies

We have examined certain difficulties which frustrate any attempt to measure the performance of the peacetime military organisation. In this section we offer some evidence that these difficulties do in fact contribute to poor management in the Canadian Army Reserve.

In 1992, the Canadian Army Reserve was the subject of an extensive review by the Office of the Auditor General whose responsibility it is to report to the House of Commons on whether "money has been expended without due regard to economy or efficiency" by any government department.

The Auditor General (1992: 431) assessed the Reserve in terms of the following criterion: "Do they provide adequately trained and equipped forces in sufficient numbers to meet their assigned responsibilities with due regard to economy and efficiency?"

The Auditor General was critical of the planning framework used within the Reserve. The report suggested that there was no justification for the existing mix of units, either by type, location or number. The report pointed out serious deficiencies in the recruiting, training and promotion policies used in the Reserve and it cites a number of other problems such as low turnout of Reservists and equipment shortages. It suggests the role of the Reserve is not clear and has not been thought out.

The Auditor General (1992: 452) states that "Militia units lack performance standards" and that "The Canadian Forces has not established operational goals for most of its Reserve Forces". The Auditor General (1992: 454) states moreover that,

“Internal management systems are weak or non-existent... In the three largest Reserve components we found serious deficiencies in performance reporting. Mobile Command, in particular, does not know how many Reserve soldiers would be ready for deployment, how many sub-units it could depend on, or what their level of training really is.”

The impression given by these passages is that the Canadian Army does not have a practical definition of performance which it can use to guide its actions. What is required is a simple concept which can be used to measure the performance of the military in peacetime.

The difficulties identified by the Auditor General are not peculiar to the Canadian Army. Various reports of the United States General Accounting Office suggest that very similar reporting deficiencies exist in the US Army Reserves and National Guard. Conversations with staff officers serving with the British Army reveal that they also suffer from almost identical difficulties.

Readiness as a Performance Measure in the Military

We have provided a brief overview of the concepts of performance (and productivity) and we have examined a number of methodological difficulties inherent in any attempt to measure the performance of a peacetime military organisation. We have noted the relative lack of success that Canada and other countries have had in overcoming these hurdles and that this seems to be due in part to the lack of a suitable definition or measure of performance. We now identify a concept which we believe has some utility as a proxy for performance in the peacetime military organisation.

Paul Hersey and Ken Blanchard (1988) have defined, as part of their work in the area of Situational Leadership, a concept which they call ‘readiness’. Hersey and Blanchard

(1988: 175-176) define 'readiness' as "the extent to which a follower has the ability and willingness to accomplish a specific task". They define 'ability' as "the knowledge, experience and skill that an individual or group brings to a particular task or activity". They define 'willingness' as "the extent to which an individual or group has the confidence, commitment and motivation to accomplish a specific task".

These concepts offer a solution to the main problems identified in this section, that is, how to define military performance in peacetime so that its attainment can be measured. It is proposed that the creation and maintenance of readiness, as defined by Hersey and Blanchard, is a good description of the performance of the military organisation in peacetime.

The Survey Instrument - Individual and Collective Readiness

In this work we will use Hersey and Blanchard's concept of readiness as the definition of the output of the Canadian Army in peacetime. It should be noted that these concepts can be applied both to soldiers individually and to groups of soldiers working together. We will use the concepts of ability and willingness to measure both the individual readiness of Regular and Reserve soldiers and the collective readiness of Regular, Total Force and Reserve units. These concepts are equally applicable and useful in each of these instances.

This section introduces the survey instruments entitled Individual Readiness and Collective Readiness as found in Appendix I.

The first ten questions of the survey instrument entitled Individual Readiness are based on instruments developed by Hersey and Blanchard (1988, 1989) in their work on Situational Leadership. This questionnaire asks supervisors to rate their

subordinates on items related to ability and willingness. The first five questions ask the supervisor to rate his subordinates according to job experience, job knowledge, problem solving ability, ability to take responsibility and the meeting of job deadlines. Together, these offer a measure of an individual's ability. The next five questions ask the supervisor to rate his subordinates according to willingness to take responsibility, achievement motivation, persistence, work attitude and independence. Together, these offer a measure of the individual's willingness. These ten questions use a semantic differential rating scale (Emory and Cooper, 1991).

Two original questions were added which ask supervisors to rate their subordinates in terms of how long it would take them to become ready to participate in a specific type of military operation. These questions offer a measure of the individual's readiness overall. These two questions use a ratio rating scale (Emory and Cooper, 1991).

Two questions on the survey instrument Collective Readiness are based on concepts developed by Hersey and Blanchard (1988, 1989) in their work on Situational Leadership. These original questions ask all participants to rate the overall ability and overall willingness of the unit to which they belong. Participants are also asked to rate the overall performance of the unit to which they belong. These three questions use a five point graphic rating scale (Emory and Cooper, 1991).

Two additional original questions ask participants to estimate how long it would take their unit to become ready to participate in a specific type of military operation. These questions use a ratio rating scale (Emory and Cooper, 1991).

Justification of the Approach Taken

The justification for the decision to use the concept of

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readiness, as defined by Hersey and Blanchard, rests on pragmatic grounds. The conceptual difficulties involved in measuring the performance of the military in peacetime have been described above. There are other terms, such as productivity, performance, effectiveness, efficiency, capability or proficiency which could be used colloquially to describe the output of the military in peacetime. However, the ability of a word to convey a general idea does not always indicate sufficient terminological exactitude to permit precise measurement. This is exactly what the concept of readiness offers us. Readiness has been defined precisely by Hersey and Blanchard (1988, 1989) in a way that is quite appropriate for use in the military. Furthermore, instruments for its measurement have been designed and these instruments have been tested and verified over a twenty year period.

In short then, we have chosen readiness as the output of the military in peacetime both because it is conceptually appealing and because it offers us a well-tested and reliable series of survey instruments upon which to build.

4.3 Factors which Affect Readiness

Adair's Three Circles Model

If we are to use readiness as a proxy for the performance of the military organisation in peacetime, we might ask what factors seem to have an important impact upon it. That is, how can the military leader best increase the readiness of his team? Adair's Three Circles Model offers some insight in this regard. According to Adair (1986), the team has three interlocking needs, each of which must be met for the team to be effective. These are task needs, group needs and individual needs. Adair (1986: 61-62) defines these as follows:

- * Task - The need to accomplish something - build a house, sing an anthem, determine a budget, plan a conference,

solve a problem, climb a mountain. The need of the group is to try to accomplish this task. So long as this task remains undone, there will be tension in the group and an urge to complete the task. The task is what the group is talking about or working on. The task is usually seen in terms of things rather than people.

- * Individual - The needs of individuals come with them into groups. People work in groups not only because of interest in the task to be accomplished but also because membership of groups fulfils their various needs...
- * Group - The need to develop and maintain working relationships among the members so that the group task can be accomplished. This is called the maintenance need of the group. Maintenance refers primarily to people and their relationships with each other. It concerns how people relate to each other as they work at the group task. Unless members listen to each other, for example, and try to build upon each other's suggestions it will be very difficult, and often impossible, for the group to accomplish its task...

Adair (1986) describes how each of these needs interact by showing them as three overlapping circles as follows:

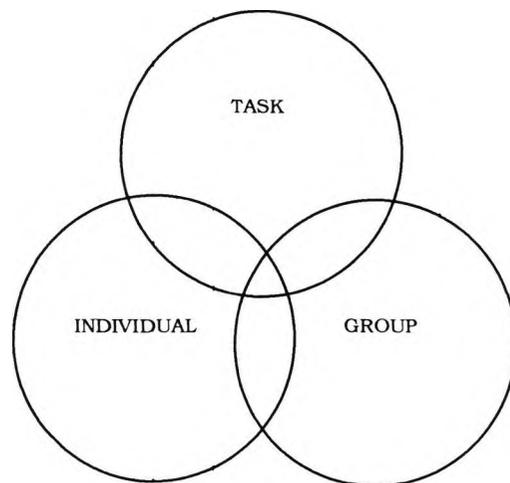


FIGURE 4-4: Adair's Three Circles Model

The three needs are shown as overlapping circles because success or failure in any one of these areas has an impact in the other areas as well. For example, the achievement of the core task has positive effects on the ability of the team to meet its group and individual needs, while a failure in achieving the

task would impinge on the ability of the team to meet these other needs. Similarly, success or failure at meeting the group or individual needs also has effects which overlap into each of the other two needs.

The effective team then, must meet the personal needs of the individuals on the team; it must meet the group needs of the team as a whole; and it must achieve it's task. This is not to say that each of these needs must be fully met at all times, nor that they are equal in importance, nor even that their relative importance remains constant over time. What is essential is that the participants themselves believe their membership in the team increases their chance of satisfying their needs in these areas. If they do not, the team will not endure.

If the effective team is one which achieves it's individual, group and task needs, then the activities of the successful leader can probably be viewed in terms of his attempt to help the team to satisfy each of these three needs. The attention of the successful leader will therefore likely be focused as shown below:



FIGURE 4-5: Adair's Three Circles Model - Focus of the Leader

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The Output - Readiness or Effectiveness

Adair suggests the effective team as the output of the Three Circles Model. He (1986: 95) defines the effective team "as one that achieves its aim in the most efficient way and is then ready to take on more challenging tasks if so required". We find Adair's Three Circles model to be very useful but we find it preferable to use the concept of readiness, rather than effectiveness, as the output of the model.

Adair's Three Circles Model, as modified above, will serve as part of the overall framework used in this study. We will now examine each of the circles individually in an effort to determine what must be done in a military context to fulfil each of these needs and thus to achieve a high degree of readiness.

Justification of the Approach Taken

Adair's theories were originally developed during research with the British Army and they are directly applicable to the military organisation. His theories have been used and accepted in other environments as well. According to Adair (1973) training based on his Three Circles Model has been conducted in a wide range of industries including manufacturing, retail, banking, insurance companies, local government, public services, the armed services, churches and charities and in a wide range of countries including Britain, Australia, New Zealand, Norway, India, Malaysia, Ethiopia, Uganda, Saudi Arabia, Belgium, Venezuela, Pakistan, and the United States.

Adair's Three Circles Model can be viewed as a contribution in both the fields of team building and leadership. We are interested in his ideas primarily for what they have to offer in the former area. We will briefly compare Adair's work with that of other prominent researchers in this area to show

why we have chosen his theories over those of others.

Writers in the area of team building take a variety of approaches. Katzenbach and Smith (1993) describe the benefits which can accrue to an organisation by increasing the use of teams and they describe the behaviour of a number of teams which they observed during their research. Larson and LaFasto (1989: 27) outline a number of attributes which seem to be shared by effective teams including "a clear and elevating goal". These two works describe what seems to take place when teams function effectively and they suggest why this often results in improved performance. However, they offer little concrete advice as to how to bring about this state of affairs. Dyer (1987) concentrates on patterns of interpersonal interaction and he recommends consultant-led workshop style training for work groups. Schein (1985) approaches the subject from a similar point of view and he describes how the outside consultant can best make an intervention in a work group to improve performance. These two writers both draw heavily on the traditions of Group Dynamics and tend to be most useful when considering the interactions of people in small group environments. However, they are less useful when looking at the larger organisation.

As described in detail above, Adair's approach to team building is to show how each of his three needs must be met in order for the group to function effectively. Adair's theories are applicable in small groups but we have also found his work to be very useful when considering issues at the organisational level. Furthermore, we have found Adair's ideas to be sufficiently specific to permit their measurement.

We have stated that we have used Adair's work more in the context of team building than of leadership. However, we will briefly examine some of the main approaches to leadership theory and explain why they have had limited appeal to us.

Many prominent leadership theorists, including Fiedler (1967, 1977), and Hersey and Blanchard (1988, 1989), concentrate on the problem of matching the leader's behaviour to the situation. This approach is relevant to the needs of individual managers and relevant also to the selection and training of individual leaders. However, we have found it less than useful when considering the question of how the organisation itself should be structured and organised. Adair's theory, while useful to the practising leader, is also useful when viewing the overall organisation at a higher level. It is for this reason, primarily, that we prefer Adair to most of the other theories of leadership.

In a sense, Adair's work is consistent with the work of Kerr and Jermier (1978) in determining the substitutes for leadership. In Adair's model one can view the leader as being responsible for ensuring that the needs represented by the three circles are met. However, by focusing on the responsibility of leaders further up the chain of command, one could also conclude that the 'system' also bears some responsibility in this regard. Therefore, the better the system gets at meeting the needs of its members, the less the lower level leader will need to satisfy all of them himself.

Team #5
It is in this sense that we are more interested in Adair's theories as they relate to teambuilding than leadership. We are interested in measuring how well the team is functioning and we are interested in any factor which may impact on this not just the contribution or non-contribution of the leader. In fact, we are interested primarily in how the organisation can best be structured and organised in order to maximise the likelihood of the success of the team regardless of the individual leader who may be placed in charge for a time.

4.4 The Individual Circle

The individual circle in Adair's Three Circles Model represents those needs which an individual brings with him when he joins a group, which he retains while he is in the group, and which he will likely take with him when he leaves the group. In this section we will examine the current research in this area as it relates to the military.

Satisfaction

The study of motivation is concerned with understanding the reasons behind human behaviour. As human beings we are constantly in the process of doing something - whether it is thinking, talking, sitting, eating, sleeping or whatever. What causes a person to choose one activity over another at any given moment? And why does that same person later make a contrary choice?

Any effort to understand human motivation must begin with a discussion of human needs. A need can be defined as the lack of something which is desired by the individual. This definition is necessarily broad and can encompass the whole spectrum of human desires. Other words which are often used interchangeably with the term needs are motives, wants, drives or impulses.

The existence of a need creates a sense of tension in the individual who will usually attempt to reduce the tension by satisfying the need. This impulse towards the satisfaction of needs is the source of most human behaviour. The cause and effect relationship between needs and actions, however, are often difficult to determine. While the individual often has many needs simultaneously, he must usually direct his attention and efforts toward a single activity at a time. He must therefore make choices. He must decide which of his

needs is the most important (or most achievable) at that time and then choose the behaviour which he believes will best allow him to satisfy it.

The individual Circle in Adair's Three Circle Model represents the fact that people bring their individual needs with them when they join groups and that one of the main functions of a group is to facilitate the process whereby group members can satisfy these needs.

Two-Factor Theory

During the course of extensive interviews with workers from a variety of backgrounds, Frederick Herzberg (1959) arrived at some important conclusions regarding the sources of satisfaction and dissatisfaction. It had thus far been assumed that these two states were simply the opposite ends of a single spectrum. Herzberg discovered that this was not true. Instead, he found that most people's workplace needs can be divided into two categories, one of which has the potential to cause much dissatisfaction but little satisfaction and one of which has the potential to cause much satisfaction but little dissatisfaction. This has been called the Two Factor Theory.

The first category of needs, which primarily has potential to cause dissatisfaction, is related to the environment of the work itself. These are called 'hygiene' factors or 'dissatisfiers'. Company policies and administration, supervision, working conditions, money, interpersonal relations, status and security are all dissatisfiers. According to Herzberg these factors have the potential to cause dissatisfaction in the worker and can have negative effects on productivity. However, while the amelioration of these factors will reduce the amount of dissatisfaction, their improvement will cause little satisfaction.

The second category of needs, which primarily has

potential to cause satisfaction, is related to the work itself. These are called 'motivators' or 'satisfiers'. Feelings of achievement, recognition, responsibility, professional growth, advancement and the work itself are all satisfiers. These factors have the potential to create real satisfaction, however, their absence will not create deep dissatisfaction.

The Military Experience

Most Armed Forces collect data on the level of satisfaction of service personnel. This includes studies regarding reasons for joining, the level of satisfaction while serving, and the decision to remain in or to leave the service.

The Canadian Forces Operational Research and Analysis Establishment (Popoff, 1988) published a sociological study of the Reserves which cited two distinct categories of reasons for enlistment in the Reserves. These were grouped together under the headings pragmatic/money and patriotic/interest.

In a study of US Army reservists, Gorman and Thomas (1991) discerned three categories of reasons for enlistment. These were service, self-improvement and money.

The Canadian Forces Personnel Applied Research Unit (Chevrier, 1990) published a profile of applicants to the Regular Force. It cited a number of reasons for applying to join the Regular Force. These are ranked from most to least important as follows:

- * Reasons for Applying
 - Learn a Trade or Profession
 - Career Advancement Opportunity
 - Do Challenging Work
 - Have a Responsible Job
 - Serve Country
 - Job Security
 - Fellowship

Work Under Good Leadership
Independence
Financial Benefits
Live in Different Places
Continue Education
Travel
Gain Discipline
Learn a Second Language
Jobs Scarce Near Home
Escape Personal Problems

The US Army (1987) published the results of a survey which sought to identify the most frequently cited reasons for joining the Army Reserve. In order of importance they are:

* Factors Important to Enlistment

Money
A chance to better myself
To develop self-confidence
To have an experience I can be proud of
To learn to become a responsible mature person
To serve my country
To become more self-reliant

Perry, Griffith and White (1991) conducted a series of surveys of junior enlisted soldiers in the US Army Reserve which allowed them to identify differences in attitudes between those that quit and those that continued to serve. The best discriminators between leavers and stayers were attitudes toward not receiving monthly pay on time and a sense of belonging to both the unit and the Army Reserve. Other useful discriminators were perceptions of pay problems, lack of recognition, lack of fair promotions, civilian job conflicts, untrustworthy unit officers, and lack of helpful unit leaders.

The Operations and Research Analysis Establishment (1988) offers a list of the most common reasons why Canadian Reservists leave the service. In decreasing order of importance these are job conflicts (34%), educational conflicts (26%), a job or educational move (22%) and joining the Regular Force (20%). The ORAE report points out that these reasons are primarily

related to conflicts between the role of the Reservist and his other obligations. Other reasons cited less frequently were personnel conflicts (8%), the Reserve being too bureaucratic (7%), more money in a civilian part time job (5%), Reserve activities boring and routine (4%), poor equipment in the Reserves (4%), and the Reserve poorly organised (4%).

The Survey Instrument - Individual Circle

As outlined above, there have been a number of studies which have examined the reasons why Regular or Reserve soldiers join and remain in the service. To date, however, there have been no studies which compare both Regular and Reserve members in this regard.

In this work we will borrow from Herzberg's Two Factor Theory to measure the difference between Regular and Reserve personnel in terms of their levels of satisfaction or dissatisfaction with regard to various aspects of their service in the Army. This will allow us a better understanding of why soldiers in each of the two components stay in the Forces. This is important because the retention of qualified personnel is essential if the team is to be successful.

This section introduces the survey instruments entitled Individual Circle / Part 1 and Individual Circle / Part 2 as found in Appendix I.

The questions on the survey instrument entitled Individual Circle / Part 1 are drawn from Herzberg's Two Factor Theory. These questions ask participants whether a list of fifteen items, such as relationships with superiors, efficiency of military administration, rates of pay and opportunities for personal growth, are sources of satisfaction or dissatisfaction. Most of these items were drawn directly from Herzberg's (1959, 1987) work although a few were modified slightly to fit the

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specific situation found in the Canadian Army. The design of the questionnaire itself was original. These fifteen questions use a four point graphic rating scale (Emory and Cooper, 1991). The four point scale was chosen in order to force respondents to describe each item in terms of either satisfaction or dissatisfaction. It was felt that it was not necessary to provide the opportunity to register a neutral response.

The survey instrument entitled Individual Circle / Part 2 contains original questions which were developed to gain additional insight into some of the issues raised in Part 1. These questions attempt to illuminate some of the finer distinctions regarding the respective satisfaction of Regular and Reserve soldiers. Five of the six questions use a five point graphic rating scale, between them using 3 different sets of terminology. The sixth question uses a modified ratio scale (Emory and Cooper, 1991).

Justification of the Approach Taken

The reader may be surprised by our decision to draw on Herzberg as the source of our questions for the individual circle. Criticisms of Herzberg, notably that his results are not reliable and that his work is method bound, would seem sufficient to preclude him from consideration for possible use. However, these criticisms do not concern us unduly, as our interest in Herzberg centres on neither his methodology nor his conclusions but rather from the fact that he offers a well tested list of factors which seem to cover most of the likely sources of satisfaction or dissatisfaction in the modern work place. In fact, one criticism of Herzberg, that his work is more a study of job satisfaction than motivation, actually highlights why his work is particularly useful to us. As our objective was to test the respective job satisfaction of Regular and Reserve soldiers across a broad spectrum of factors, his work represented a good point of departure.

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Despite our lack of concern over the criticisms levelled at Herzberg, it should be stated that our decision to borrow from him does not suggest any particular support for his conclusions nor any intention to evaluate our results in terms of his theory.

4.5 The Group Circle

The group circle in Adair's Three Circles Model represents the necessity for teams to meet certain collective needs. These collective needs relate to how the members of the team view themselves and how they interact and relate to each other over time. Much has been written about the importance of these types of factors on the battlefield. This section offers a list of group needs which are widely agreed to be important in the military context. Each of these needs will be described, along with some of the most commonly accepted methods by which each can be met.

Socialisation and the Primary Group

Robbins (1991) defines socialisation as the process that adapts employees to the organisation's culture. Most groups have some sort of socialisation process. This can be a formal one such as an orientation program in a factory or an informal one such as a hazing ritual in a college dormitory.

Anyone who has spent any time in the Canadian Army has probably heard the saying, "We are here to protect democracy, not to practice it". While meant in jest, this statement conveys a very real truth; that in order to be effective, the military organisation must inculcate in its members many attitudes and values which are contrary to those prevailing in the society at large. Because of this, the socialisation process in the military is lengthy and rigorous.

According to Kellet (1982), the first attitude which must

be modified in the military is that of individualism. In civilian society, individualism and individual differences are valued and encouraged. The soldier, however, must learn to conform to the expectations of the group and be dedicated to the needs of the group in preference even to his own needs. In fact, in basic training in Canada, the greatest insult that can be levelled against a new soldier, either by staff or fellow recruits, is that he is acting like an individual.

The purpose of the socialisation process during basic training is three fold. First, the new recruit must accept the predominant values of the military organisation. Second, he must learn the basic skills which are required in his new trade. Third, and perhaps most importantly, he must feel himself to be a part of the military team to which he now belongs.

It is well understood that soldiers, once in combat, do not fight primarily for country or ideology but rather out of devotion to their primary group or, in other words, their section or platoon. Marshall (1947) and others have suggested that small groups of soldiers fight much better when they have been together for a long period of time and know each other well. Their close relationship fosters a feeling of trust and mutual confidence. For a military unit to be effective, it's soldiers must truly feel that they are a part of it and value the respect of their fellows as highly as they value the preservation of their own lives.

Discipline

Where discipline is discussed at all in books on organisational behaviour, it is generally only in terms of the various minor rules and regulations which are used to govern the behaviour of individuals on a daily basis. Military discipline certainly provides for codified rules of conduct, but it also has connotations which do not have close parallels in

civilian organisations (para-military organisations such as police and fire services excepted).

According to Kellet (1982),

“Discipline (Military), whether the formal variety that includes deterrent sanctions and concern for order or of the internalised and social variety, has the intention - and very often the effect - of ensuring that a soldier carries out his assigned tasks. In other words the object of discipline is obedience.”

The type of obedience and discipline demanded in the military organisation has no substitute. Men must be made to endure conditions from which they would naturally shrink. To quote a private of the American Civil War (Baynes, 1967: 180),

“The truth is, when bullets are whacking against tree trunks and solid shot are cracking skulls like egg shells, the consuming passion in the heart of the average man is to get out of the way. Between the physical fear of going forward, and the moral fear of turning back, there is a predicament of exceptional awkwardness, from which a hidden hole in the ground would be a wonderfully welcome outlet.”

Baynes (1967: 180) writes that,

“Military discipline has two purposes. The first is to ensure that the soldier does not give way in times of great danger to his natural instinct for self-preservation, but carries out his orders even though they may lead to his own death. The object of discipline in this case is to leave no doubt in the mind of any officer or man about where his duty lies.... The secondary one is to keep order within an Army itself, so that it may be easily moved and controlled, and so that it should not abuse its power. In this latter respect, it must be remembered that even the Army of a highly civilised nation can slip easily into disorder, particularly on active service. Men living together without feminine influences, armed and trained to fight, can behave in a way that would be unthinkable in ordinary life. The only antidote to potential disorder is strong discipline.”

Discipline instils in soldiers the habit of obeying orders

instantly and without hesitation. This habit is instilled by conducting training in a high intensity manner where questions are not tolerated and no explanations are offered. It is assumed that those soldiers who stay in the service will come to understand the reasons behind the orders at some point later in their careers. But that is not immediately necessary. They must first learn simply to obey. The emphasis on 'chicken shit' early in the military career is therefore not without purpose. The Army does not need soldiers who will obey when the orders are good, for all soldiers will do that. The Army needs soldiers who will obey regardless.

Training

The military training cycle is typically composed of a phase of individual training followed by a phase of collective training. In a battalion sized unit, the training cycle will likely be completed over the period of a year. Typically, individual training is conducted during the winter and collective training during the summer.

Individual training is usually conducted in the form of courses where soldiers are taught specific skills. In modern armies the new soldier is likely to spend up to one half of his time on various courses. Senior NCO's are likely to spend as much as one half of their time instructing on these same courses.

Collective training is conducted within the unit, generally in the form of command post exercises or field exercises. These are usually conducted progressively at higher and higher levels. For example a 6 week exercise might allocate the first two weeks for company level training, followed by two weeks of Battalion level training and culminating in a two week Brigade level exercise. The goal of this training is to integrate the individual soldier into the unit as a whole and to practice soldiers in the

skills which they learned during the individual training portion of the training year.

The military organisation is unusual in that training accounts for the bulk of its activity. Unlike most organisations, which are called upon to perform their primary task on a regular basis, the military may not be called upon for a generation or even longer. Training, therefore becomes the primary focus of its activity.

Leadership

There can be little doubt that leadership is a key element in the creation of a military team. The Canadian Forces implicitly recognises some of the main trends of thought in the area of leadership. For example, The Canadian Forces Precis 300 - The Army (1984:3-9) draws on both the Ohio State and University of Michigan studies when it states that the two principles of leadership are:

- * The accomplishment of the mission
- * The concern for one's soldiers

On the other hand the military does not shy away from listing traits or qualities which are necessary if the leader is to be successful. The CFP 300 - The Army (1984: 3-11 - 3-12) states that the leader should have the following qualities:

- * Leadership Qualities
 - Knowledge
 - Decisiveness
 - Calmness
 - Robustness
 - Initiative
 - Control
 - Example
 - Vision
 - Paternalism
 - Courage

Notably absent from the various precis on leadership which are published by the Canadian Army is reference to any of the various contingency approaches to leadership.

While it does seem that the Canadian Armed Forces could benefit from a more sophisticated approach toward leadership, for our purposes, it suffices to state that the Canadian Forces recognises the importance of leadership at all levels of the military organisation.

Culture, Beliefs and Values

What is the culture of the military organisation? Or perhaps a better question would be, what sort of culture should a military organisation have if it is to be successful?

It is assumed that the average soldier is imbued with a sense of patriotism. Kellet (1982) agrees but suggests this will have more impact upon his decision to enlist than on his behaviour once in combat. He quotes Field Marshall Wavell (1982: 171) as saying "A man does not flee because he is fighting in an unrighteous cause; he does not attack because his cause is just".

Kellet (1982) suggests that a belief in the justice of a war is a necessity if an Army is to hold together over the long run but that this in itself is far from sufficient. Ellis (1980: 282) quotes numerous studies and dismisses ideological motivations as having had any real influence on the attitudes of American soldiers in either Europe or Asia during World War II. He says,

"...the struggle...was too all-consuming to allow of irrelevant 'flannel' about just wars or the good of humanity. These were irrelevancies in the fullest sense of the word, for they simply had no place on the battlefield. It is not that men would not have cared deeply about such things back home, but simply that modern combat took everything out of a man so that his mind was entirely occupied with the problems of eating, drinking,

staying awake and staying alive.”

Ellis (1980: 281) suggests the thoughts of men in combat are of necessity narrowly focused. He says,

“For the average soldier, once he was in combat, his view became microcosmic, and he lived only from day to day, barely daring to think about the end of the war, increasingly unconscious that life had any meaning beyond the unremitting ghastliness of endless combat. The soldier became increasingly bound up with his tiny fraternity of comrades who shared his suffering and they alone came to represent the real world. In the last analysis, the soldier fought for them and them alone, because they were his friends and because he defined himself only in the light of their respect and needs.”

The importance of feeling hatred towards the enemy is difficult to determine. Lord Moran in *The Anatomy of Courage* (1945: 52) suggests that “Englishmen are not good haters”. He details many examples of how the German armies in World War I endeavoured to increase hatred of the enemy and the manner in which English soldier scoffed at this type of activity.

If lofty ideas have no place on the battlefield and the lower emotions are insufficient motivation, what drives men forward? Ellis (1980) says that discipline holds part of the answer but that, in the end, men can not be compelled to do something which is more frightening than the punishment they would receive for not doing it. And executions for failure to perform in battle have been practically unheard of since World War I. He says that soldiers move forward primarily because of their own desires to live up to the expectations of their comrades.

Lord Moran suggests that in battle, the well-being of the individual becomes subordinated to the well-being of the group. Speaking of soldiers in the World War I, he (1945: 156) says,

“I remember men recruited at the street corner by starvation who came to act on the principle that if the

Regiment lived it did not matter if they died, though they did not put it that way.”

This spirit of self-sacrifice seems to be an important foundation of the culture of the successful military organisation. Van Crevald (1982) and Gabriel and Savage (1978) both dealt extensively with the important effects of having officers share the risks and hardships of the men. They both concluded that there is a clear relationship between the effectiveness of an Army and the ratio of officer/enlisted man casualties. They suggest that it is the duty of officers to create, by their example, the spirit of self-sacrifice which is so essential to success on the battlefield.

The culture of a successful military organisation then is based not upon high sounding principles but rather upon each man's desire for self-respect and the personal bonds that men feel for each other and for the group. And this is ultimately manifested in a spirit of self sacrifice.

Morale, Group Cohesion and Unit Spirit

Under Canadian doctrine there are ten principles of war, the first being 'Seize and Maintain the Initiative' and the second being 'The Maintenance of Morale'. Many military leaders in fact believe that the importance of morale supersedes all other considerations.

Baynes (1967: 93) suggests historians overemphasise the importance of strategy and tactics because they are so much easier to reconstruct from the historical evidence. He says,

“Historians can so easily read appreciations, plans and orders for battles and miss the two vital points that first of all the plan may never reach the troops who are meant to carry it out, and second that the troops may not do what they are told when they get their orders....The truth is that a brilliant plan of battle in the tactical sense can be a complete failure if morale is bad, while a poor plan

can be made to work well if morale is good.”

Perhaps the importance of good morale can best be explained by examining the effects of bad morale. Colonel G.F.R. Henderson was quoted by S.L.A. Marshall (1947: 169-170) as saying that, “When troops once realise their inferiority, they can no longer be depended on. If attacking, they refuse to advance. If defending, they abandon all hope of resistance.”

S.L.A. Marshall (1947) found that during most battles only 25 percent of the personnel had fired even a single shot. The rest, while moving forward with their units, had failed to make the extra effort to raise and fire their weapon. This demonstrates the often subtle manner in which the ordinary soldier can shirk his duty. On the mechanised battlefield the only real way to ensure that a soldier performs his duty is to make him want to do it. This is the crux of morale.

How then can morale be instilled? Baynes (1967: 94) listed the routine matters which he said are essential to good morale,

“The standard causes of good morale are good food, adequate rest, mail, proper medical care, efficient equipment, and good welfare services, particularly to help families at home... Armies can fight well without any of these things but never for very long.”

How then can morale be measured? Baynes (1967: 94) gives us a number of clear indications of good morale. He says that a sense of cheerfulness is the first indicator. He says “The awful expression of a dispirited soldier should cause his commander more worry than anything apart from the actuality of defeat in battle”. He suggests that smart turn out and willingness to salute are two good indicators of good morale as are the absence of serious disciplinary problems and an attention to hygiene and health. He also mentions an aggressive spirit in terms of patrolling and an attention to

detail in terms of reducing unnecessary risks to a minimum. Finally, he says that morale,

“manifests itself in the soldier’s absolute determination to do his duty to the best of his ability in any circumstances. At its highest peak it is seen as an individual’s readiness to accept his fate willingly even to the point of death, and to refuse all roads that lead to safety at the price of conscience.”

The Survey Instrument - Group Circle

In this work we will attempt to determine the extent to which the units in British Columbia District are successfully cultivating the various factors which we have identified as having important effects on the meeting of group needs.

The author read approximately one hundred books on the military during the first two years of this research. Some of these were academic in approach (Keegan, 1976, 1987, 1993) (Kellett, 1982) (Sarkesian, 1980) and were rigorous in nature while others (English, 1981) (Lind, 1985) could better be described as trade publications and had more of a practical orientation. Some (Fuller, 1992) (Liddel Hart, 1991) could perhaps fit both of these descriptions. These ranged from the ancient including Sun Tzu and Vegetius (Phillips, 1985) to the merely old (Clausewitz, 1983) to the modern (van Crevald, 1991). Of course such an endeavour would not have been complete unless it included the thoughts and reflections (Hackworth, 1989) (Montgomery, 1958) (Patton, 1981) of military leaders themselves. It should be stated that the hundred or so books read for this research were chosen selectively, after many years of less focused reading in the area. The books chosen, therefore, tended to be the classics in the field.

This section introduces the survey instrument entitled Group Circle as found in Appendix I.

The survey instrument entitled Group Circle contains six

original questions which were developed based on the factors identified in the literature review as having an important effect on building the military team. Participants were asked to rate their unit's performance in each of the following areas: welcoming new members, discipline, training, leadership, attitude, and morale. The terms used are not necessarily identical to those in the literature review but were chosen because they would be more readily understood by the participants. Specifically, the term welcoming new members was used in lieu of socialisation and the term attitude was used in lieu of culture, beliefs and values. These six questions use a five point graphic rating scale (Emory and Cooper, 1991).

Justification of the Approach Taken

As noted above, the survey instrument was created after reviewing a wide range of military literature. This reading was carried out in tandem with an attempt to create a conceptual structure (readiness as a product of the three circles) on which this work could be based. As this conceptual structure was developed, it became apparent that a list of group needs which are important in the military context would have to be found. When a search for such a list in the academic literature was unsuccessful, it became necessary to construct one from scratch. This proved possible by drawing from the reading which was done in the military literature and which has been described above. This was done by distilling the common themes noted in these various books into a list of group needs and confirming and adding to the list by further reading. Needs were included in the list only when there seemed to be widespread consensus of opinion amongst the various writers that the need was important. Consensus of opinion on how a given need should be satisfied was not necessary for the item to be included.

The precise nomenclature chosen for the various categories could, of course, be criticised. While the inclusion of discipline,

training and leadership seem fairly hard to dispute, the terms chosen for the other factors, namely, socialisation and the primary group or culture, beliefs and values or morale, group cohesion and unit spirit could quite possibly be improved upon.

A better approach to the problem might have been to conduct a proper meta-analysis of all available works of military literature. But as illuminating as this would have undoubtedly been, it was clearly beyond the scope of this project. Instead, we have had to rely on the less rigorous approach described above. If this seems rather subjective, it should be stated that the author has set for himself a high standard of certainty for the inclusion of items. For example, two items which were seriously considered for inclusion but which were ultimately rejected were personnel practices, and reward and punishment. Each of these were discussed in many of the works reviewed but not in enough to suggest that there was a consensus of opinion regarding their importance.

The author, then, makes a limited claim with regard to the list developed. He does not suggest that these six items are the only ones that could be included in a list of this nature or that the terminology chosen is perfect. He claims only that it is a good list supported by the writings of many diverse and influential writers on the subject.

4.6 The Task Circle

The Task Circle in Adair's Three Circles Model represents the apparent need of every group to accomplish something in order to validate it's own existence.

The task of the individual soldier, or the unit, is that thing upon which attention and effort is directed. The question of how to measure the completion of the task, however, can at times be perplexing. We will offer some examples of how tasks

are measured in the Canadian Army today. In order to do this we will divide tasks into three categories - simple, moderately complex and complex. Obviously, these divisions are arbitrary but they will illustrate the situation adequately for our purposes.

Simple tasks are usually measured in one of two ways. The amount of time taken for one successful attempt is recorded or the number of successful attempts during a certain period of time are counted. An example of the former would be a requirement to run a certain distance in a certain amount of time. An example of the latter would be a rifle exercise where each soldier would have a fixed amount of ammunition and a limited amount of time in which to shoot at a given target. Simple tasks are not necessarily easy for those attempting them. However, it is usually possible to standardise the conditions under which they are performed, and they do not usually require the co-ordination of others, therefore success or failure is fairly easy to determine.

Moderately complex tasks are those in which conditions can not be easily standardised and/or which require the co-ordination of a number of individuals. For this reason, it is more difficult to judge success or failure.

An example of a moderately complex task would be a simple fire plan in the artillery. The standard for such a fire plan is to call down and adjust fire on three targets in less than 40 minutes and then co-ordinate the fire with the advance of the supporting arms. This standard may seem clear enough, however, many factors can contribute to success or failure in addition to the skill of the Forward Observation Officer. The terrain, weather, visibility and the difficulty of the targets all have important effects. The response of the guns, both in terms of speed and accuracy, also have important effects. Thus, a definable standard exists, but determination of success or

failure is highly subjective and must often take these other factors into account.

Another example of a moderately complex task would be a combat team attack. As with the artillery fire plan, a large number of factors can contribute to the success or failure of the attack, many of them beyond the control of the commander. The rater, then, has the choice between holding the combat team commander responsible for the success or failure of the attack or simply for performing his own role adequately. Of course, even the concept of the "success or failure of the attack" is subjective, as this entails an assessment of whether the combat team would have prevailed against a hypothetical enemy if the enemy had been real and had fought back. And this in an Army which has not been involved in actual combat during the lifetime of anyone currently serving.

Complex tasks are those in which so many variables are either beyond ones control or simply can not be considered that any notion of success or failure becomes meaningless. An example of this would be a Tactical Exercise Without Troops (TEWT). A TEWT consists of a prewritten tactical problem, usually using either a cloth model or real ground. Officers are invited to consider the problem posed, offer a solution, and usually prepare the necessary orders. Afterward, officers present their solutions. In this process, it is always reinforced that there are many potential solutions to any tactical problem and that the only way to truly validate them is to test them in battle. Of course, this is not possible. As a result, while the objective of the exercise is to teach tactics, the written work which is generated is usually assessed more on staff duties, grammar and punctuation than on tactical merit.

As can be seen, then, tasks in the military range from the simple to the complex. Simple tasks do not require the co-ordination of others and it is usually possible to standardise

the conditions under which they are performed. Simple tasks are therefore reasonably measurable. Moderately complex tasks are those in which conditions can not be standardised or which require the co-ordination of a number of individuals.

Moderately complex tasks are therefore measurable but with some difficulty. Complex tasks involve a large number of factors in which conditions are difficult or impossible to standardise and where there is a lack of concrete feedback regarding success or failure. Complex tasks are therefore almost impossible to measure with confidence.

The Measurement Instrument - Task Circle

In this work we will offer examples of how the Canadian Army currently attempts to measure the extent to which individual units are achieving their task. Two sources of information were made available by the Canadian Army for this study.

The first of these sources of information was the results achieved by 10 of the 14 units which participated at the 1994 British Columbia District Soldier Skills Evaluation. The results of the remaining 4 units were unavailable because of computer difficulties. During this evaluation, soldiers were rated, on a pass/fail basis, on their individual skill levels in the following areas: Rifle Handling; Machine Gun Handling; Grenade Handling; Anti-Tank Weapon Handling; First Aid; Battle Craft; Fitness; Communications; and Nuclear, Bacteriological and Chemical Defence. Units were scored based on the proportion of their soldiers in attendance who passed each of these individual tests. A total score for the unit was then calculated based on the average of the scores of the members in the unit in each of these areas. Units were also assigned participation quotas equal to one half of their total strength and were scored on the number of their soldiers who turned out compared to their quota. This evaluation measures simple tasks as defined

above.

The second of these additional sources of information was the results achieved by individual units in the Reserve Artillery Competitions held between 1990 and 1994. During this competition units are rated on their skill levels in the following areas: Battery Commander; Forward Observation; Reconnaissance; Command Post; Local Defence; Communications and the Gun Line. A total unit score is then calculated based on the sum of the scores in each of these areas. This evaluation measures moderately complex tasks as defined above.

Justification of the Approach Taken

The use of the two sources of information described above can be defended on practical grounds. While not perfect for our purposes they were available and, as the army was using them for their own purposes, they did have a degree of independent credibility.

The results of the Soldier Skills Evaluation were actually quite well suited to our needs. This was due to the fact that the results related to the same soldiers who participated in completing our surveys. Of course, any time one uses secondary sources of information, it is likely that they will not conform exactly to one's needs. A consideration of the weaknesses of this particular source of information are offered below.

One might criticise the specific tests undertaken as part of the Soldier Skills Evaluation, in particular, the fact that the tests related primarily to infantry skills and that this might provide an unfair advantage to units of that arm as a result. This criticism is well taken, but it must also be kept in mind that all soldiers must be infanteers first and must always be

prepared to fight, on their feet, with their personal weapons.

One might also criticise the fact that the skills evaluated were solely individual in nature and that the collective performance of the units were not directly assessed. This criticism is accurate on the face of it, however, it might well be argued that these individual tests provide a fair assessment of the ability of the units involved to train their soldiers in individual skills and that this is an important collective task of a military unit.

Perhaps the most important criticism that might be directed toward these results is that individual scores were not provided. That is, while the subject of the specific evaluations were individual skills, individual scores were not retained on file by the army, and only the collective scores of units were provided to us. This limited the evaluation of patterns of individual readiness which might have been possible otherwise.

All of these criticisms, while valid to some extent, pale before one basic fact - that these results were made available. The Canadian Army is not normally very accommodating about opening its files for outside examination. Ultimately, in a research of this nature, decisions must be made on practical grounds. The opinion of the researcher is that any attempt to improve the quality of the results obtained, by bringing the criticisms outlined here to the attention of the military authorities, would have been unsuccessful. These results were collected by the army for its own purposes and were only provided afterward to the researcher as a courtesy. The army would not have altered its form of evaluation or its method of collecting or tabulating the results for the convenience of an outside researcher. Thus these results, while not perfect, were the best which could have been obtained under the circumstances.

Clear # 5

4.7 Performance Estimation in Battle

We have, thus far, concentrated our attention on the difficulties inherent in any attempt to measure performance in the peacetime military organisation. In this section we will examine an attempt to quantify and measure military performance on the battlefield.

In his book (Understanding War, 1987) T.N. Dupuy argues the need to create a 'Theory of Combat'. He reviews the writings of Napoleon, Clausewitz, Jomini, Moltke, du Picq and Fuller, among others, with a view to discovering whether any of their writings could serve as a basis for such a model. He claims to have discovered the basis for such a theory in the writings of Clausewitz.

Dupuy (1987) bases his theory on several portions of Clausewitz' writings but particularly on his thoughts about attrition in war. Dupuy places his interpretation of Clausewitz into a mathematical formulae and then carries out some small refinements. The refined formulae is:

$$P = S \times V_f \times CEV$$

where:

P	=	Combat Power
S	=	Force Strength
V _f	=	Variable Factors
CEV	=	Combat Effectiveness Value

The Force Strength (S) is calculated using the number of infantry soldiers as a common denominator. Other weapons such as tanks, artillery, and aircraft are included by calculating their equivalent values in terms of infantry soldiers. For example, a military force might consist of 100,000 soldiers, 500 tanks, and 100 aircraft. The value of the tanks and aircraft

might be pegged at 100 soldiers and 500 soldiers respectively. The Force Strength could then be stated as:

$$S = 100,000 + 500(100) + 100(500) = 200,000$$

Variable Factors (Vf) are any factors which increase or detract from the strength of a military force. These include environmental factors, operational factors and behaviour factors. Examples of environmental factors include terrain, weather and season. Examples of operational factors include posture, mobility, vulnerability, fatigue, surprise and air superiority. Examples of behavioural factors include leadership, training, experience, morale, and manpower quality. It should be emphasised that the examples given for each of these three factors are not comprehensive lists. In fact, part of the strength of Dupuy's model comes from the fact that additional variables can be easily added if they prove to be useful.

Any number of factors may be added into the model. If a factor is given a value of greater than one this means it increases the Combat Power of the force. If it is given a value of less than one this means it detracts from the Combat Power of the force.

The Combat Effectiveness Value (CEV) of a force is calculated by comparing its success in repeated engagements while holding force strength and variable factors constant. Dupuy (1987) found while analysing Second World War engagements that some units performed consistently better than others. As a result, the predictability of battle outcomes was improved if the strength (S) was multiplied by a factor which represented the relative combat effectiveness of each unit. A Combat Effectiveness Value (CEV) of greater than one indicates the unit is better than average. A CEV of less than one indicates the unit is worse than average.

To gain any insight from a calculation of the Combat Power of a fighting formation it must be compared against the same figure for an opposing force. Following are calculations which Dupuy (1986) provides for the German and Allied Forces during the Ardennes Campaign of 1940.

$$\frac{P}{P} = \frac{\text{German S} \times \text{Terrain Factor} \times \text{Posture Factor} \times \text{CEV}}{\text{Allied S} \times \text{Terrain Factor} \times \text{Posture Factor} \times \text{CEV}}$$

$$= \frac{P}{P} = \frac{G: (1712) (1.0) (1.0) (1.2)}{A: (720) (1.4) (1.3) (1.0)} = 1.57$$

As can be seen, the Germans had a sizeable local superiority in Force Strength. The Allies had the advantage of terrain and defensive posture. The Germans were deemed to have had a Combat Effectiveness Value of 1.2 times better than the Allies. The resulting ratio of 1.57 indicates the Germans had a good chance of success in this particular engagement.

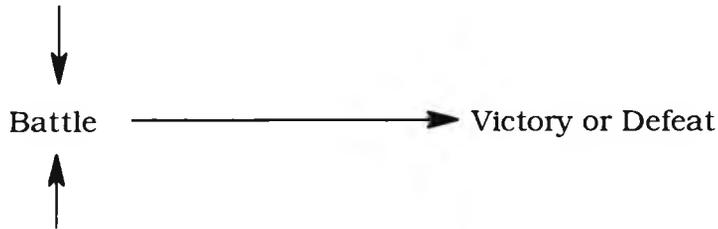
Dupuy states that his work is still in the developmental stages, however, the work has an impressive internal coherence. The strength of Dupuy's work is that it allows for the inclusion of an unlimited number of factors. Any factor which is believed to be of some benefit (or detriment) to one side or the other can be estimated and included. This methodology is powerful in that it points out the manner in which factors such as personnel administration, training, or leadership can have a multiplicative effect on the overall performance of the unit.

Dupuy's model offers us a useful framework for understanding the impact which various factors can have upon the eventual success of a military force. However, any attempt to use it to predict the outcome of a future conflict quickly returns us to our original problem of measuring, or estimating, the performance of military forces in peacetime.

4.8 Toward an Overall Theory

It might be useful to place the various theories and concepts discussed above into a single comprehensive framework. In this section we will attempt to do just that. We will introduce the Integrated Framework of Military Readiness, Unit Attributes and Battle Outcomes as outlined below.

Combat Power
(Opposing Force)



Combat Power = $S \times V_{fo} \times V_{fe} \times V_{fb} \times CEV$
(Friendly Force)

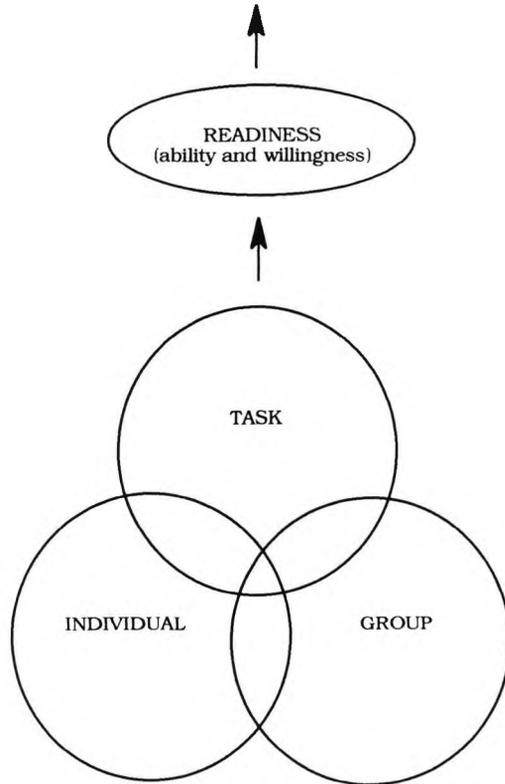


Figure 4-6: Integrated Framework of Military Readiness, Unit Attributes and Battle Outcomes

Item # 4

Item # 3

Item # 10

where:

S	=	Force Strength
Vfo	=	Variable Factors - operational
Vfe	=	Variable Factors - environmental
Vfb	=	Variable Factors - behavioural
CEV	=	Combat Effectiveness Value

In the following paragraphs we will describe the function of the Integrated Framework of Military Readiness, Unit Attributes and Battle Outcomes.

Adair's Three Circles contribute directly to readiness as defined by Hersey and Blanchard. Readiness, in turn, impacts upon the operation of the behavioural factors in Dupuy's model.

The behavioural factors are multiplied by the other two variable factors in Dupuy's model and are then multiplied again by force strength and the combat effectiveness value. The product of these is the combat power of the friendly force. This is juxtaposed with the combat power of the opposing force to determine the likely victor in any encounter.

This framework combines many of the theories and concepts described in this chapter into a single framework which describes the process through which military success can be gained.

It should be noted that this process does not unfold completely in peacetime - as readiness does not find immediate expression on the battlefield. Despite this, the operation of this framework offers support for our contention that readiness is the most useful definition of the output of the peacetime military organisation. Force strength, the combat effectiveness value, and operational and environmental factors are all important on the battlefield but none of them can be influenced prior to the outbreak of war by the mid-level military commander. The only

practical way the mid-level military commander can hope to influence the outcome of some future conflict is through the behavioural factors in Dupuy's model. And the only way he can do this is by increasing the readiness of the troops under his command through the operation of the three circles.

In this section we have attempted to describe the functioning of the Integrated Framework of Military Readiness, Unit Attributes and Battle Outcomes. In the following chapters we will examine various measures of readiness and the three circles in the Canadian Army today and we will attempt to test the validity of our framework.

CHAPTER V

PURPOSE AND PLAN OF THE EMPIRICAL STUDY

5.1 Introduction and Methodology

The purpose of the empirical portion of this study is to achieve a better understanding of the realities of Total Force. We seek to achieve this understanding within the context of the Integrated Framework of Military Readiness, Unit Attributes and Battle Outcomes, as outlined in chapter 4. Specifically, we seek to understand: 1) The similarities and differences between Regular and Reserve soldiers in terms of readiness; 2) The similarities and differences between Regular and Reserve soldiers in terms of the satisfaction of their individual needs; 3) The similarities and differences between the satisfaction of the group needs of Reservists in Reserve units and those in Total Force units; 4) The similarities and differences between Regular, Total Force and Reserve units in terms of their ability to achieve the task; 5) The interaction between these various items.

It is hoped that this study will aid in the understanding of both the Regular and Reserve Forces individually but moreso of how to best combine them effectively into a Total Force.

In the introduction to chapter 3 we discussed our decision to conduct the research into the Total Force experiments in the form of a series of interviews. We explained that we chose that particular format because we were unsure of the exact scope of our inquiries or the possible range of issues on which our respondents might wish to comment. We believe that decision proved to be a good one.

In this section, the scope of our inquiry is much more tightly defined (partly as a result of insights gained in chapter 3) and we have concluded that the problem in this instance relates

primarily to the accurate measurement of Regular and Reserve attitudes and opinions. We have concluded that the survey format will best serve our needs in this regard.

As stated above, this study is based upon the Integrated Framework of Military Readiness, Unit Attributes and Battle Outcomes, which combines elements of Adair's Three Circles Model, Dupuy's Theory of Combat and the concept of readiness as defined by Hersey and Blanchard. Four survey instruments were used in this study. The first collected simple biographical information on items such as age, rank, marital status, education and military experience. The second collected information with regard to readiness. The third collected information with regard to the individual circle. The fourth collected information with regard to the group circle. Additional sources of information relating to the task circle have also been obtained. Each of these have been described in some detail in chapter 4.

These surveys were administered to a sample of Regular and Reserve soldiers in British Columbia District during the fall of 1994. In this chapter we will describe the process by which we developed and tested the survey instruments. We will describe the characteristics of the sample which was studied. And we will describe the statistical techniques which were used in the analysis. In the next chapter we will describe the results of this empirical research.

5.2 A Statement of the Hypotheses

We will test a number of hypotheses in the next chapter. Specifically, we will test the null hypothesis that:

- * Regular and Reserve soldiers are the same in terms of individual ability.
- * Regular and Reserve soldiers are the same in terms of individual willingness.

- * Regular and Reserve soldiers are the same in terms of individual readiness.
- * Regular, Total Force, and Reserve units are the same in terms of collective ability.
- * Regular, Total Force, and Reserve units are the same in terms of collective willingness.
- * Regular, Total Force, and Reserve units are the same in terms of their collective performance.
- * Regular, Total Force, and Reserve units are the same in terms of collective readiness.
- * Regular and Reserve soldiers are the same in terms of their respective levels of satisfaction or dissatisfaction with regard to various aspects of their service.
- * Reserve and Total Force units are the same in terms of a number of group factors.
- * Regular, Total Force and Reserve units perform the same in terms of the accomplishment of certain objective tasks.

Some of these hypotheses will be tested using the chi-square test, where the alternative hypothesis is the standard one, that is, the groups involved are not the same.

Some of these hypotheses will be tested using the two sample t-test where the alternative hypotheses used for these tests are non-directional, that is, the two group means are not equal.

We will also examine the relationship between these various items. Specifically we will examine:

- * The relationship between each of the three circles described in Adair's Three Circles Model.
- * The effect of the three circles on collective ability, collective willingness and collective readiness.
- * The relationship between the collective ability, collective willingness, collective performance and collective readiness.

These relationships will be examined through the use of canonical correlation and multiple regression.

5.3 Pilot Studies

Three pilot studies were carried out. This was done primarily in order to verify that the instruments were comprehensible to the participants and to identify potential problems of data collection. The collection of this sample also facilitated the preparation of the computer program which was used in the analysis of the main study.

The 15th Field Regiment, RCA served as the pilot sample because the author is an officer in that unit and as a result had easy access to the participants. The initial sample was conducted in March of 1994 and consisted of 37 Reserve and 7 Regular members. Only the instruments relating to the biographical information, the group circle and readiness were administered at this time. This administration demonstrated that these instruments were comprehensible to the participants and were precise enough to generate statistically significant results. Only small adjustments were made to these instruments following this administration.

It was during the analysis of these initial results that the study took its final form and the instruments regarding the individual circle were added. These new instruments were pilot tested in September of 1994. This second sample consisted of 39 Reservists. This administration demonstrated that the instrument was comprehensible to the participants and that it was precise enough to generate statistically significant results. However, participants suggested that this survey instrument was too long and redundant in certain aspects. The instrument was redesigned. The revised instrument was pilot tested later in September of 1994. This third sample consisted of 11 Reservists. This administration demonstrated that the revised

instrument was acceptable.

The information relating to the task circle was provided by various Headquarters of the Canadian Army for units under their command. This information was accepted in its raw form and no opportunity existed to request revisions. Therefore no pilot testing of the information acquired in this manner was possible.

5.4 Overview of the Subject Organisation

During the fall of 1994, British Columbia District consisted of 15 units including: one Reserve Armoured Reconnaissance Regiment; one Reserve Armoured Regiment; two Reserve Artillery Regiments; two Reserve field engineer squadrons; two Reserve Service Battalions; two Reserve medical companies; and one Regular and four Reserve Infantry Battalions which, together, were tasked to form a single 'Total Force Infantry Battalion' as described in Chapter 3.

All of the units of British Columbia District participated in a Soldier Skills Evaluation during the Fall of 1994. This exercise was conducted on two different weekends in different parts of the province. The District Commander approved the administration of this survey during that exercise provided that it be done on a voluntary basis. The soldiers of all but one of the units were invited to participate in the survey. The Commanding Officer of one Reserve Infantry Battalion refused to allow his unit to participate.

5.5 Overview of the Sample

Of the 794 soldiers who attended the 1994 Soldier Skills Evaluation, 488 completed surveys as requested. Of these, 434 were Reservists and 54 were Regulars. Among the Reserve soldiers, 33 had previously served in the Regular Force. Among

the Regulars, 8 had previously served in the Reserve.

Rank

Regular and Reserve soldiers were asked to record their current rank. The breakdown is shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .000.

	LCol	Maj	Capt	Lt	2/Lt	OCdt	
Regular	0 (0%)	1 (2%)	4 (9%)	1 (2%)	0 (0%)	0 (0%)	
Reserve	3 (1%)	6 (1%)	19 (4%)	16 (4%)	11 (3%)	4 (1%)	
	CWO	MWO	WO	Sgt	MCpl	Cpl	Pte
Regular	0 (0%)	2 (4%)	7 (15%)	13 (28%)	8 (17%)	10 (21%)	1 (2%)
Reserve	3 (1%)	4 (1%)	10 (2%)	33 (8%)	44 (10%)	113 (26%)	162 (38%)

Table 5-1: Rank

We have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their current ranks at the 5% level.

Among those participating in the survey, a larger proportion of Regulars than Reservists held the rank of Sergeant, Warrant Officer or Captain. There was a roughly similar proportion of Corporals, Master Corporals and Majors in each of the two groups. There were no Regulars in the rank of Chief Warrant Officer, Officer Cadet or Lieutenant-Colonel. Most significantly, 37% of Reservists held the rank of Private, while only one Regular soldier held this rank. The decision was made to exclude Privates completely as this created a more homogeneous sample.

After excluding Privates the sample consisted of 325 soldiers including 272 Reservists and 53 Regulars. The breakdown of ranks after excluding Privates is shown in the

following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .004.

	LCol	Maj	Capt	Lt	2/Lt	OCdt
Regular	0 (0%)	1 (2%)	4 (9%)	1 (2%)	0 (0%)	0 (0%)
Reserve	3 (1%)	6 (2%)	19 (7%)	16 (6%)	11 (4%)	4 (2%)
	CWO	MWO	WO	Sgt	MCpl	Cpl
Regular	0 (0%)	2 (4%)	7 (15%)	13 (28%)	8 (17%)	10 (21%)
Reserve	3 (1%)	4 (2%)	10 (4%)	33 (12%)	44 (17%)	113 (42%)

Table 5-2: Rank - Excluding Privates

We have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their current ranks at the 5% level. However, the decision to exclude Privates was maintained.

Age

Regular and Reserve soldiers were asked to record their current age. The breakdown is shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the two sample t-test. The p-value is .00.

	Mean	SD
Regular	34.61	7.53
Reserve	29.77	8.39

Table 5-3: Age

We have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their age at the 5% level. Among those who participated in the survey, the Regulars were, on average, almost five years older than the Reservists.

Marital Status

Regular and Reserve soldiers were asked to record their current marital status. The breakdown is shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .00.

	Single	Married	Divorced	CLaw	Separated
Regular	7 (18%)	32 (82%)	0 (0%)	0 (0%)	0 (0%)
Reserve	143 (61%)	76 (32%)	6 (3%)	10 (4%)	1 (0%)

Table 5-4: Marital Status

We have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their marital status at the 5% level. Among those participating in the survey, the Regulars were far more likely to be married than were Reservists. It is likely that this difference can be at least partially explained by the difference in the average ages of the two groups.

Education

Regular and Reserve soldiers were asked to record their highest educational level attained. The breakdown is shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .00.

	Some High School	High School	Some College	University Degree
Regular	7 (18%)	19 (48%)	9 (23%)	5 (13%)
Reserve	17 (7%)	57 (24%)	123 (52%)	41 (17%)

Table 5-5: Education

We have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of education at the 5% level. Among those participating in the survey, the Reservists tended to be somewhat better educated than their Regular counterparts. Regular soldiers were more than twice as likely as Reservists to have dropped out of high school or to list a high school diploma as their highest educational achievement. Reservists were over twice as likely to have completed some college or university as were Regulars. In fact, over half of all Reservists reported having completed some college. The number of survey respondents with university degrees was approximately 50 percent higher among Reservists.

Time in Service

Regular and Reserve soldiers were asked to record the number of years they had served in the Regular Force and the number of years they had served in the Reserve Force. Several patterns emerged with regard to time in service among those participating in the survey. At the rank of Corporal, Reservists had an average of 5 years experience versus 11 for Regulars. This gap narrowed, however, for each subsequent rank and virtually disappeared by the rank of Warrant Officer. This trend did not repeat itself at the officer level. In fact, Reserve Captains, on average, had served 3 years longer than their Regular counterparts.

5.6 Statistical Analysis

Several different statistical methods were used for the analysis in this and the next chapter. In cases where we wanted to make comparisons in terms of the percentages of soldiers belonging to certain categories we used the chi-square test. In cases where we wanted to compare the average of a certain score of the population, we used the two sample t-test.

In general, the chi-square test requires that each cell contain at least five counts. The categorical variables we examined initially had between four and eight categories and many of the cells contained less than five counts. We collapsed some of the categories in an attempt to alleviate this problem. Despite having taken this action we still occasionally had a cell count which was below five. We decided not to collapse the categories further to prevent the categories from becoming very coarse in nature.

Following the assumptions proposed by Adair, we concluded that there might be some interactive effects between the three circles. Since each circle is composed of multiple items this necessitates the use of multivariate techniques.

The first technique that was considered was a multivariate analysis of variance where items of one circle are treated as independent and items of another circle are treated as dependent. This technique however, was not considered to be appropriate as one of the key assumptions of Adair's model is that each circle should be treated as equal and that each of the circles have effects on each of the others. Each circle, then should be more appropriately treated as an independent variable.

With this in mind, canonical correlation analysis emerged as the technique most suitable to the analysis. This particular method allows for the investigation of relationships between two sets of variables, each of which is treated as independent. This technique calculates overall scores for each of the sets of variables where the overall scores have the maximum correlation coefficient. This allows the researcher to determine the extent to which the sets vary together without hypothesising as to the direction of any effect.

To analyse the effects of the three circles on readiness we

used multiple regression analysis. In this analysis we treat the various items within each circle as independent variables and the various items of readiness as the dependent variables.

The question of rater effects arose during the analysis, particularly with regard to individual readiness. To evaluate the rater effects we employed multivariate analysis of variance where the subjects status as Regular or Reserve and the raters status as Regular or Reserve are the independent variables and the various scores are the dependent variables.

CHAPTER VI

RESULTS OF THE EMPIRICAL STUDY

6.1 Introduction

In this chapter we will test the following: 1) The similarities and differences between Regular and Reserve soldiers in terms of readiness; 2) The similarities and differences between Regular and Reserve soldiers in terms of the satisfaction of their individual needs; 3) The similarities and differences between the satisfaction of the group needs of Reservists in Reserve units and in Total Force units; 4) The similarities and differences between Regular, Total Force and Reserve units in terms of their ability to achieve the task; 5) The interaction between these various items.

6.2 Readiness

Individual Readiness

The following sections draw on questions asked in the instrument entitled Individual Readiness as found in Appendix I.

The main contribution of these sections is in terms of the adaptation of the concepts developed by Hersey and Blanchard for use as a performance measure in the military environment. We use these instruments to measure how Regular and Reserve soldiers differ in terms of individual readiness.

We will test the hypothesis that Regular and Reserve soldiers are the same in terms of individual ability, individual willingness and individual readiness. We will use the scores given to individual soldiers on each of these items as the dependent variable. We will use the status of these soldiers as

Regular or Reserve as the independent variable.

Job Experience

Regular and Reserve soldiers were rated by their superiors in terms of job experience. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .10.

	Very High (8)	High (7)	Medium (6)	Low (5)	Very Low (1-4)	Mean	SD
Regular	4 (13%)	16 (52%)	7 (23%)	4 (13%)	0 (0%)	6.64	.877
Reserve	17 (11%)	44 (30%)	44 (30%)	30 (20%)	13 (9%)	6.10	1.24

Table 6-1: Job Experience

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of job experience at the 5% level.

Job Knowledge

Regular and Reserve soldiers were rated by their superiors in terms of job knowledge. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .28.

	Very High (8)	High (7)	Medium (6)	Low (5)	Very Low (1-4)	Mean	SD
Regular	3 (10%)	16 (52%)	8 (26%)	4 (13%)	0 (0%)	6.58	.847
Reserve	21 (14%)	51 (34%)	36 (24%)	32 (22%)	8 (5%)	6.25	1.25

Table 6-2: Job Knowledge

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of

job knowledge at the 5% level.

Problem Solving Ability

Regular and Reserve soldiers were rated by their superiors in terms of problem solving ability. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .19.

	Very High (8)	High (7)	Medium (6)	Low (5)	Very Low (1-4)	Mean	SD
Regular	6 (19%)	9 (29%)	13 (42%)	3 (10%)	0 (0%)	6.58	.922
Reserve	23 (16%)	45 (30%)	40 (27%)	26 (18%)	14 (9%)	6.20	1.29

Table 6-3: Problem Solving Ability

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of problem solving ability at the 5% level.

Ability To Take Responsibility

Regular and Reserve soldiers were rated by their superiors in terms of ability to take responsibility. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .12.

	Very High (8)	High (7)	Medium (6)	Low (5)	Very Low (1-4)	Mean	SD
Regular	6 (19%)	10 (32%)	12 (39%)	3 (10%)	0 (0%)	6.61	.919
Reserve	27 (18%)	55 (37%)	30 (20%)	23 (16%)	13 (9%)	6.35	1.33

Table 6-4: Ability to Take Responsibility

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of

ability to take responsibility at the 5% level.

Meeting Job Deadlines

Regular and Reserve soldiers were rated by their superiors in terms of meeting job deadlines. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .19.

	Very High (8)	High (7)	Medium (6)	Low (5)	Very Low (1-4)	Mean	SD
Regular	4 (13%)	11 (37%)	11 (37%)	4 (13%)	0 (0%)	6.50	.900
Reserve	19 (13%)	54 (36%)	31 (21%)	30 (20%)	14 (9%)	6.20	1.25

Table 6-5: Meeting Job Deadlines

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of meeting job deadlines at the 5% level.

Willingness to Take Responsibility

Regular and Reserve soldiers were rated by their superiors in terms of willingness to take responsibility. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .37.

	Very High (8)	High (7)	Medium (6)	Low (5)	Very Low (1-4)	Mean	SD
Regular	7 (23%)	8 (26%)	12 (39%)	4 (13%)	0 (0%)	6.58	.992
Reserve	38 (26%)	48 (32%)	37 (25%)	16 (11%)	9 (6%)	6.58	1.22

Table 6-6: Willingness to Take Responsibility

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of

willingness to take responsibility at the 5% level.

Achievement Motivation

Regular and Reserve soldiers were rated by their superiors in terms of achievement motivation. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .45.

	Very High (8)	High (7)	Medium (6)	Low (5)	Very Low (1-4)	Mean	SD
Regular	8 (26%)	10 (32%)	11 (35%)	2 (6%)	0 (0%)	6.77	.920
Reserve	34 (23%)	55 (37%)	36 (24%)	12 (8%)	10 (7%)	6.60	1.16

Table 6-7: Achievement Motivation

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of achievement motivation at the 5% level.

Persistence

Regular and Reserve soldiers were rated by their superiors in terms of persistence. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .85.

	Very High (8)	High (7)	Medium (6)	Low (5)	Very Low (1-4)	Mean	SD
Regular	6 (19%)	11 (35%)	10 (32%)	3 (10%)	1 (3%)	6.58	1.02
Reserve	30 (20%)	51 (34%)	38 (26%)	17 (11%)	12 (8%)	6.45	1.22

Table 6-8: Persistence

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of

persistence at the 5% level.

Work Attitude

Regular and Reserve soldiers were rated by their superiors in terms of work attitude. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .26.

	Very High (8)	High (7)	Medium (6)	Low (5)	Very Low (1-4)	Mean	SD
Regular	1 (3%)	9 (30%)	11 (37%)	8 (27%)	1 (3%)	6.03	.927
Reserve	18 (12%)	53 (36%)	39 (26%)	25 (17%)	13 (9%)	6.24	1.17

Table 6-9: Work Attitude

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of work attitude at the 5% level.

Independence

Regular and Reserve soldiers were rated by their superiors in terms of independence. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .73.

	Very High (8)	High (7)	Medium (6)	Low (5)	Very Low (1-4)	Mean	SD
Regular	7 (23%)	12 (39%)	9 (29%)	3 (10%)	0 (0%)	6.74	.929
Reserve	33 (22%)	52 (35%)	37 (25%)	17 (12%)	8 (5%)	6.57	1.14

Table 6-10: Independence

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of

independence at the 5% level.

Individual Readiness - Training Necessary for Low Intensity Operations

Regular and Reserve soldiers were rated by their superiors in terms of how many additional weeks training they would require before they would be ready for deployment into a low intensity combat situation like the former Yugoslavia. The results are shown in the following chart. Using the two sample t-test we tested the null hypothesis that the mean score for the two groups were equal in this regard. The two tailed p-value was .02.

	Mean	SD
Regular	7.00	4.49
Reserve	9.82	5.73

Table 6-11: Individual Readiness - Training Necessary for Low Intensity Operations

We have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of the additional individual training necessary for low intensity operations at the 5% level.

Individual Readiness - Training Necessary for High Intensity Operations

Regular and Reserve soldiers were rated by their superiors in terms of how many additional weeks training they would require before they would be ready for deployment into a high intensity combat situation like what could have been expected against the former Warsaw Pact. The results are shown in the following chart. Using the two sample t-test we tested the null hypothesis that the mean score for the two groups were equal in this regard. The two tailed p-value was .11.

	Mean	SD
Regular	14.12	11.3
Reserve	17.91	10.93

Table 6-12: Individual Readiness - Training Necessary for High Intensity Operations

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of additional individual training necessary for high intensity operations at the 5% level.

Summary Table of Results - Individual Readiness

	Regular Force Mean	Reserve Force Mean	Statistical Significance P-value
Job Experience	6.64	6.10	.10
Job Knowledge	6.58	6.25	.28
Problem Solving Ability	6.58	6.20	.19
Ability to Take Responsibility	6.61	6.35	.12
Meeting Job Deadlines	6.50	6.20	.19
Willingness to Take Responsibility	6.58	6.58	.37
Achievement Motivation	6.77	6.60	.45
Persistence	6.58	6.45	.85
Work Attitude	6.03	6.24	.26
Independence	6.74	6.57	.73
IR - Trg Nec Low Intensity Ops	7.00	9.82	.02
IR - Trg Nec High Intensity Ops	14.12	17.91	.11

Table 6-13: Table of Results - Individual Readiness

Analysis - Individual Readiness

We tested the null hypothesis that Regular and Reserve soldiers are the same in terms of individual readiness which we have defined as consisting of individual ability and individual willingness.

The chi-square tests do not indicate any statistically significant difference between the two populations in terms of the five questions related to ability, namely job experience, job knowledge, problem solving ability, ability to take responsibility, and meeting job deadlines. However, we note that the Regular soldiers had higher mean scores and smaller standard deviations on each of these five questions. In short, the results seem to suggest that Regular soldiers may have higher ability

than Reservists but that the magnitude of this difference is not large.

Of great interest is the breakdown of the scores. It appears that the lower mean scores of the Reservists on all items relating to ability are primarily a result of the larger number of low Reserve scores. When the scores of individuals in the lowest category (low), are disincluded in the calculation, the difference between Reserve and Regular scores disappear. In no case do more than 10% of Reservists receive these low scores. In no case did any Regular soldier receive a low score on any of the items related to ability. In other words, if one does not include approximately the bottom 10 percent of Reservists, then Reservists score as well on the ability scales as do Regular soldiers.

It should be pointed out that these results do not reflect the conventional wisdom in the Canadian Army, nor were they expected by the researcher. The conventional wisdom in the Canadian Army is that Regular soldiers do have substantially higher levels of ability than Reservists. There are two possible sources of non randomness which might have caused the results to underestimate the difference between Regular and Reserve soldiers in terms of ability. First, it is possible that the Regular soldiers who were posted to BC District were less able than those who were retained in other Regular units. Second, it is possible that the Reservists who chose to participate in the BC District Soldier Skills Evaluation were more able than those who chose not to attend. In the opinion of the researcher, both of these possibilities are likely with the latter being fairly probable.

In addition to these two possible sources of non randomness, there is another possible explanation of why the difference between the scores of Regular and Reserve soldiers in terms of ability are smaller than might have been expected. It

is possible, that while the difference between Reservists and Regulars is small overall, it is larger among certain specific groups. For example, in the artillery, Regular Sergeants are required to pass a rigorous 10 month course, which qualifies them to the title Assistant Instructor in Gunnery, prior to promotion to Warrant Officer. This course is the pinnacle of a Regular artillery NCO's career. Reservists are required to pass only four two-week courses prior to promotion to the same rank. No one would question the fact that Regular Force artillery Warrant Officers are more able as a group than their Reserve counterparts. Similarly, Regular artillery Captains are eligible to attend a 10 month course which qualifies them to the title Instructor in Gunnery. There is no corresponding course available to Reservists. No one would question the fact that IG qualified Regular Captains are more able as a group than their Reserve counterparts.

As a result of this asymmetrical training system, Regulars who have taken these courses tend to have much higher levels of ability than Reservists who have not had access to this level of training. However, and this is the important point, any differential at other ranks is much less clear. It is possible therefore, that while the difference in the ability of Regular and Reserve soldiers is small overall, it is much larger at some rank levels and in certain positions. It is possible that the presence of small numbers of these highly qualified individuals in Regular units would have large positive effects on the performance of those units. This could cause an observer to gain an exaggerated impression of the difference between the ability of individual Regular and Reserve soldiers overall.

For the purposes of this study we will adopt what appears to be the most acceptable conclusion; that the overall level of ability is probably higher in the Regular Force than it is in the Reserve Force but that the difference is not great; and that some Regular soldiers, at specific rank levels, receive training

which raises their level of ability far above that normally found in the Reserve at comparable rank levels.

More work should be done to analyse the patterns of ability between Regular and Reserve soldiers at different rank levels and between the arms. It is likely that more statistically significant results would be obtainable from a larger and more equally balanced sample.

The chi-square tests do not indicate any statistically significant difference between the two populations in terms of the 5 questions related to willingness, namely willingness to take responsibility, achievement motivation, persistence, work attitude and independence.

For the purposes of this study we will adopt what appears to be the most acceptable conclusion; that the overall level of willingness is approximately the same in the Regular Force as it is in the Reserve Force.

Regular soldiers were rated as being more ready than Reservists as they were seen as needing less additional training before they could be ready for deployment into an operational theatre. While the difference between the two groups was statistically significant on one of the two questions, in practical terms the differential was quite small. On average, Reservists are expected to require between 3 and 4 weeks more training than Regulars before deployment into a combat situation. Differentials of this magnitude are unlikely to be significant in any war scenario currently being contemplated.

The results obtained in this section are important for several reasons. A clear understanding of the difference in the patterns of ability and willingness between the Regular and Reserve soldiers could assist defence planners with regard to decisions as to how to structure the Army. Total Force units

could be structured so as to place Regular soldiers of certain rank levels, who may tend to have higher levels of ability, into jobs which demand specialised technical knowledge. On the other hand, jobs which don't require particularly high levels of ability, but which do require reasonably high levels of willingness, could be designated primarily for Reservists. Most importantly, units so composed could be deployable within acceptable time frames.

Rater Effects - Individual Readiness

In the previous sections, Regular and Reserve soldiers were rated by their immediate supervisors in terms of items relating to individual ability, individual willingness and individual readiness. These supervisors were either Regular or Reserve themselves. The possibility of rater effects was recognised in advance, but it was not thought possible to control for them during the design of the experiment.

An analysis of rater effects was carried out during the analysis of the data. We carried out a two way multivariate analysis of variance where the components of the response vector corresponded to the scores of the five questions relating to ability and the five questions relating to willingness. The independent variables were the rater's service status as either Regular or Reserve and the subject's service status as either Regular or Reserve. These test results indicate that there is no systematic bias and that the rater effects are not statistically significant overall.

However, when examining the data first hand, some evidence of mild bias did seem to be apparent. In general, Regulars were rated higher by Regulars than they were by Reservists. And Reservists were rated higher by Reservists than they were by Regulars. In most cases, however, these differences were not statistically significant.

In terms of the five questions related to willingness, Regular soldiers who were rated by Regular soldiers received scores which were higher than those received by Regular soldiers who were rated by Reservists. However, these differences were not statistically significant.

	Regulars Rated by Regulars N=13		Regulars Rated by Reservists N=4		P-Value
	Mean	SD	Mean	SD	
Willingness to take Responsibility	6.84	.800	6.25	9.57	.233
Achievement Motivation	7.07	.862	6.50	1.29	.311
Persistence	6.61	1.04	6.00	1.41	.355
Work Attitude	6.15	.800	5.75	1.25	.450
Independence	7.00	.707	6.50	1.29	.323

Table 6-14: Rater Effects - Willingness of Regulars

In four of the five questions related to willingness, Reserve soldiers who were rated by Reserve soldiers received scores which were higher than those received by Reserve soldiers who were rated by Regulars. However, these differences were not statistically significant.

	Reservists Rated by Regulars N=12		Reservists Rated by Reservists N=85		P-Value
	Mean	SD	Mean	SD	
Willingness to take Responsibility	6.25	1.42	6.56	1.22	.417
Achievement Motivation	6.25	1.35	6.57	1.17	.380
Persistence	6.08	1.44	6.41	1.17	.381
Work Attitude	6.25	1.13	6.17	1.16	.838
Independence	6.25	1.35	6.58	1.17	.369

Table 6-15: Rater Effects - Willingness of Reservists

In terms of the five questions related to ability, Regular soldiers who were rated by Regular soldiers received scores which were higher than those received by Regular soldiers who were rated by Reservists. However, these differences were not statistically significant.

	Regulars Rated by Regulars N=13		Regulars Rated by Reservists N=4		P-Value
	Mean	SD	Mean	SD	
Job Experience	6.92	.862	6.75	.957	.736
Job Knowledge	6.92	.493	6.75	.957	.629
Problem Solving Ability	7.00	.707	6.50	1.00	.276
Ability to Take Responsibility	6.76	.926	6.75	.957	.971
Meeting Job Deadlines	6.75	.965	6.25	.957	.384

Table 6-16: Rater Effects - Ability of Regulars

In terms of the five questions related to ability, Reserve soldiers who were rated by Reserve soldiers received scores which were higher than those received by Reserve soldiers who were rated by Regulars. These differences were statistically significant on four out of five questions.

	Reservists Rated by Regulars N=12		Reservists Rated by Reservists N=85		P-Value
	Mean	SD	Mean	SD	
Job Experience	5.25	1.21	6.18	1.04	.005
Job Knowledge	5.33	1.07	6.36	1.03	.001
Problem Solving Ability	5.33	1.30	6.30	1.21	.011
Ability to Take Responsibility	5.33	1.30	6.43	1.19	.004
Meeting Job Deadlines	5.58	1.37	6.25	1.16	.069

Table 6-17: Rater Effects - Ability of Reservists

Overall, these differences are not statistically significant, however, it does appear that some rater effects may be present. It is risky to hypothesise as to the effect that these rater effects would have had on the results compared to what would have been obtained had all rating been done by a neutral party or by a panel made up of both Regulars and Reservists. However, it seems a risk worth taking.

Approximately 7 out of 8 Reservists were rated by other Reservists. Approximately 3 out of 4 Regulars were rated by other Regulars. Therefore, 'neutral' scorers would have probably provided scores which would have been slightly lower on average for both Regulars and Reservists in terms of willingness and for Regulars in terms of ability. 'Neutral' scorers would have probably provided scores which would have been more substantially lower for Reservists in terms of ability. This

would likely have caused the differences between the scores received by Regular and Reserve soldiers in terms of ability to be more statistically significant. Effects such as this would not have changed any of the conclusions drawn in the above section.

Collective Readiness

The following sections draw on questions asked in the instrument entitled Collective Readiness as found in Appendix I.

The main contribution of these sections is in terms of the adaptation of the concepts developed by Hersey and Blanchard for use in the military environment as a performance measure. We use these instruments to measure how the addition of Regular soldiers to a Reserve unit affects the collective readiness of the unit.

We will test the hypothesis that Regular and Total Force units are the same in terms of collective ability and collective willingness, collective performance and collective readiness. We will use the scores given to units on each of these items as the dependent variable. We will use the status of these units as Total Force or Reserve as the independent variable.

Collective Ability

Reserve soldiers in both Reserve and Total Force units were asked to rate their units in terms of collective ability in comparison with that unit or other units they had worked with in the past. The results are shown in the following chart. We tested the hypothesis that the two types of units are the same in this regard using the chi-square test. The p-value is .06.

	Much Better (5)	Better (4)	Same (3)	Worse (2)	Much Worse (1)	Mean	SD
Total Force	2 (4%)	29 (53%)	21 (38%)	2 (4%)	1 (2%)	3.52	.716
Reserve	20 (12%)	61 (37%)	58 (35%)	20 (12%)	6 (4%)	3.41	.975

Table 6-18: Collective Ability

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of overall collective ability at the 5% level. However, these results are close enough to being significant that it should be pointed out that they are in accord with our tentative conclusions with regard to the respective ability of Regular and Reserve soldiers as stated above.

Collective Willingness

Reserve soldiers in both Reserve and Total Force units were asked to rate their units in terms of collective willingness in comparison with that unit or other units they had worked with in the past. The results are shown in the following chart. We tested the hypothesis that the two types of units are the same in this regard using the chi-square test. The p-value is .53.

	Much Better (5)	Better (4)	Same (3)	Worse (2)	Much Worse (1)	Mean	SD
Total Force	2 (4%)	24 (42%)	22 (39%)	9 (16%)	0 (0%)	3.33	.786
Reserve	15 (9%)	60 (36%)	62 (37%)	26 (16%)	3 (2%)	3.34	.913

Table 6-19: Collective Willingness

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of overall collective willingness at the 5% level.

Collective Performance

Reserve soldiers in both Reserve and Total Force units were asked to rate their units in terms of collective performance in comparison with that unit or other units they had worked with in the past. The results are shown in the following chart. We tested the hypothesis that the two types of units are the same in this regard using the chi-square test. The p-value is .06.

	Much Better (5)	Better (4)	Same (3)	Worse (2)	Much Worse (1)	Mean	SD
Total Force	3 (5%)	30 (55%)	18 (33%)	4 (7%)	0 (0%)	3.58	.712
Reserve	20 (12%)	58 (35%)	62 (37%)	20 (12%)	6 (4%)	3.39	.971

Table 6-20: Collective Performance

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of individual training necessary for high intensity operations at the 5% level.

Collective Readiness - Training Necessary for Low Intensity Operations

Reserve soldiers in both Reserve and Total Force units were asked to estimate how many additional weeks training their units would require before they would be ready for deployment into a low intensity combat situation such as exists in the former Yugoslavia. The results are shown in the following chart. Using the two sample t-test we tested the null hypothesis that the mean score for the two types of units were equal in this regard. The two tailed p-value was .31.

	Mean	SD
Total Force	13.48	8.55
Reserve	16.97	25.28

Table 6-21: Collective Readiness - Training Necessary for Low Intensity Operations

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of additional collective training necessary for high intensity operations at the 5% level.

Collective Readiness - Training Necessary for High Intensity Operations

Reserve soldiers in both Reserve and Total Force units were asked to estimate how many additional weeks training their units would require before they would be ready for deployment into a high intensity combat situation like what could have been expected against the former Warsaw Pact. The results are shown in the following chart. Using the two sample t-test we tested the null hypothesis that the mean score for the two groups were equal in this regard. The two tailed p-value was .64.

	Mean	SD
Total Force	23.12	13.06
Reserve	24.68	23.49

Table 6-22: Collective Readiness - Training Necessary for High Intensity Operations

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of additional collective training necessary for high intensity operations at the 5% level.

Summary Table of Results - Collective Readiness

	Total Force Mean	Reserve Force Mean	Statistical Significance P-value
Collective Ability	3.52	3.41	.06
Collective Willingness	3.33	3.34	.53
Collective Performance	3.58	3.39	.06
CR - Trg Nec Low Intensity Ops	13.48	16.97	.31
CR - Trg Nec High Intensity Ops	23.12	24.68	.64

Table 6-23: Table of Results - Collective Readiness

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Analysis - Collective Readiness

Although not quite statistically significant, the results of the survey suggest that participants may perceive Total Force units as having slightly higher collective ability than Reserve units. This finding is consistent with the findings relating to the individual ability of Regular and Reserve soldiers. As Regular soldiers are expected to have somewhat higher levels of ability, their arrival into Total Force units could be expected to increase the collective ability of those units.

The results of the survey indicate that participants perceive Total Force units as having approximately the same collective willingness as Reserve units. This finding is consistent with the findings related to the individual willingness of Regular and Reserve soldiers. As Regular soldiers are not believed to be any more willing than Reserve soldiers, their arrival in a Total Force unit would not be expected to impact on the collective willingness of the unit.

Although not statistically significant, the results of the survey suggest that participants may perceive Total Force units as having higher collective performance than Reserve units. This finding would tend to indicate that overall collective performance is a function of both collective ability and collective willingness and that the affects of increased ability are felt immediately upon the introduction of individuals with higher levels of this trait.

The results indicate that participants believe Total Force and Reserve units would require approximately the same amount of time to prepare for deployment into a combat situation. Thus, the small differences between Total Force and Reserve units in terms of collective ability and collective willingness do not appear to have any important effect on collective readiness. It is worth commenting on the extremely

large standard deviations relating to these items. These are to be expected since no Reserve unit has been deployed into either high or low intensity operations in the lifetime of anyone presently serving.

6.3 The Individual Circle

The Individual Circle / Part 1

The following sections draw on questions asked in the instruments entitled Individual Circle / Part 1 as found in Appendix I.

The main contribution of these sections is in terms of the adaptation of Herzberg's work for use in the military environment. We use this instrument to measure how Regular and Reserve members differ in terms of their respective levels of satisfaction and dissatisfaction with military service.

We will test the hypothesis that Regular and Reserve soldiers are the same in terms of their respective levels of satisfaction or dissatisfaction with the service. We will use individual soldiers self reported levels of satisfaction or dissatisfaction as the dependent variable. We will use the status of the soldier as Regular or Reserve as the independent variable.

Relationships with Superiors

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to their relationships with their superiors. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .38.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	11 (28%)	24 (62%)	4 (10%)	0 (0%)	3.17	.601
Reserve	43 (18%)	160 (68%)	24 (10%)	7 (3%)	3.02	.638

Table 6-24: Relationships with Superiors

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction or dissatisfaction with regard to relationships with superiors at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Relationships with Peers

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to their relationships with their peers. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .06.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	27 (66%)	34 (34%)	0 (0%)	0 (0%)	3.65	.480
Reserve	103 (44%)	124 (53%)	6 (3%)	1 (0%)	3.41	.573

Table 6-25: Relationships with Peers

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction or dissatisfaction with regard to relationships with peers at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Relationships with Subordinates

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to their relationships with their subordinates. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .10.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	23 (59%)	16 (41%)	0 (0%)	0 (0%)	3.58	.498
Reserve	92 (39%)	131 (56%)	7 (3%)	3 (1%)	3.33	.602

Table 6-26: Relationships with Subordinates

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction or dissatisfaction with regard to relationships with subordinates at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Efficiency of Military Administration

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to the efficiency of military administration. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .53.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	2 (5%)	15 (38%)	18 (46%)	4 (10%)	2.38	.747
Reserve	19 (8%)	87 (37%)	87 (37%)	41 (17%)	2.35	.863

Table 6-27: Efficiency of Military Administration

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction or dissatisfaction with regard to the efficiency of military administration at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Job Security

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to their job security. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .00.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	16 (43%)	17 (46%)	2 (5%)	2 (5%)	3.27	.804
Reserve	39 (17%)	141 (61%)	40 (17%)	11 (5%)	2.90	.724

Table 6-28: Job Security

We have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction or dissatisfaction with regard to job security at the 5% level. Regular Force personnel report higher rates of satisfaction with regard to this item than do Reservists.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Rates of Pay

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to their rates of pay. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .40.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	4 (10%)	16 (40%)	14 (35%)	6 (15%)	2.45	.875
Reserve	17 (7%)	124 (54%)	67 (29%)	22 (10%)	2.59	.774

Table 6-29: Rates of Pay

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction with rates of pay at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Pension Benefits

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to their pension benefits. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .00.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	6 (16%)	21 (55%)	8 (21%)	3 (8%)	2.78	.810
Reserve	13 (6%)	49 (24%)	47 (23%)	96 (47%)	1.89	.977

Table 6-30: Pension Benefits

We have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction with regard to pension benefits at the 5% level. Regular Force personnel report higher rates of satisfaction with regard to this item than do Reservists.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Status of Being in the Forces

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to the status of being in the Forces. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .71.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	14 (37%)	20 (53%)	4 (11%)	0 (0%)	3.26	.644
Reserve	84 (36%)	116 (50%)	24 (10%)	8 (3%)	3.18	.754

Table 6-31: Status of Being in the Forces

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction with regard to the status of being in the forces at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Recognition for a Job Well Done

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to recognition for a job well done. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .03.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	15 (39%)	19 (50%)	3 (8%)	1 (3%)	3.26	.723
Reserve	44 (19%)	132 (58%)	41 (18%)	10 (4%)	2.92	.739

Table 6-32: Recognition for a Job Well Done

We have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction with regard to relationships with superiors at the 5% level. Regular Force personnel report higher rates of satisfaction with regard to this item than do Reservists.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Opportunities for Personal Growth

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to opportunities for personal growth. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square

test. The p-value is .51.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	7 (18%)	27 (71%)	4 (11%)	0 (0%)	3.07	.539
Reserve	48 (21%)	136 (61%)	33 (15%)	7 (3%)	3.00	.699

Table 6-33: Opportunities for Personal Growth

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction with regard to opportunities for personal growth at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Opportunities for Advancement

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to opportunities for advancement. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .04.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	4 (10%)	24 (60%)	7 (18%)	5 (13%)	2.67	.828
Reserve	42 (19%)	142 (63%)	34 (15%)	7 (3%)	2.97	.680

Table 6-34: Opportunities for Advancement

We have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction with regard to opportunities for advancement at

the 5% level. Reserve personnel report higher rates of satisfaction with regard to this item than do Regulars.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Opportunities to take on Responsibility

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to opportunities to take on responsibility. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .14.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	15 (39%)	17 (45%)	5 (13%)	1 (3%)	3.21	.776
Reserve	87 (38%)	128 (56%)	10 (4%)	4 (2%)	3.30	.635

Table 6-35: Opportunities to Take on Responsibility

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction with regard to opportunities to take on responsibility at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Work Itself

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to the work itself. The results are shown in the following chart.

We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .70.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	13 (35%)	20 (54%)	4 (11%)	0 (0%)	3.24	.641
Reserve	76 (33%)	133 (59%)	15 (7%)	3 (1%)	3.24	.629

Table 6-36: The Work Itself

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction with regard to the work itself at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Sense of Achievement

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to their sense of achievement. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .78.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	12 (31%)	22 (56%)	5 (13%)	0 (0%)	3.17	.643
Reserve	72 (31%)	125 (54%)	27 (12%)	6 (3%)	3.14	.718

Table 6-37: Sense of Achievement

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of

their level of satisfaction with regard to sense of achievement at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Opportunity to Serve Canada

Regular and Reserve soldiers were asked to report their respective levels of satisfaction or dissatisfaction with regard to their opportunity to serve Canada. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .60.

	Much Satis- faction (4)	Some Satis- faction (3)	Some Dissatis- faction (2)	Much Dissatis- faction (1)	Mean	SD
Regular	17 (44%)	19 (49%)	2 (5%)	1 (3%)	3.33	.700
Reserve	114 (50%)	87 (38%)	18 (8%)	10 (4%)	3.33	.802

Table 6-38: Opportunities to Serve Canada

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their level of satisfaction with regard to opportunity to serve Canada at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units was not statistically significant.

Summary Table of Results - The Individual Circle / Part 1

	Regular Force Mean	Reserve Force Mean	Statistical Significance P-value
Relationships with Superiors	3.17	3.02	.38
Relationships with Peers	3.65	3.41	.06
Relationships with Subordinates	3.58	3.33	.10
Efficiency of Military Administration	2.38	2.35	.53
Job Security	3.27	2.90	.00
Rates of Pay	2.45	2.59	.40
Pension Benefits	2.78	1.89	.00
Status of Being in the Forces	3.26	3.18	.71
Recognition for a Job Well Done	3.26	2.92	.03
Opportunities for Personal Growth	3.07	3.00	.51
Opportunities for Advancement	2.67	2.97	.04
Opportunities to take on Responsibility	3.21	3.30	.14
Work Itself	3.24	3.24	.70
Sense of Achievement	3.17	3.14	.78
Opportunity to Serve Canada	3.33	3.33	.60

Table 6-39: Table of Results - The Individual Circle / Part 1

Analysis - The Individual Circle / Part 1

The questions above formed the instrument entitled The Individual Circle / Part 1 which asked Regular and Reserve soldiers to rate their respective levels of satisfaction or dissatisfaction on a number of satisfiers and dissatisfiers. Dissatisfiers were relationships with superiors, relationships with peers, relationships with subordinates, efficiency of military administration, job security, rates of pay and pension benefits. Satisfiers were status of being in the forces, recognition for a job well done, opportunities for personal growth, opportunities for advancement, opportunities to take on responsibility, the work itself, sense of achievement, and the opportunity to serve Canada.

The results supported Herzberg's findings that individuals generally report higher levels of dissatisfaction with regard to dissatisfiers and higher levels of satisfaction with regard to satisfiers. The mean score for all satisfiers was 3.15 for Regulars and 3.13 for Reservists. The mean score for all dissatisfiers was 3.04 for Regulars and 2.78 for Reservists. However, given the relatively high levels of satisfaction reported with regard to relationships with superiors, peers and subordinates, by both Regular and Reserve personnel, one

might question whether these items should be classified as dissatisfiers for military personnel.

Regular soldiers reported higher levels of satisfaction overall than did Reservists. Regular soldiers reported higher levels of satisfaction than did Reservists on 10 out of 15 items. Reserve soldiers reported higher levels of satisfaction than did Regular soldiers on three items. Regular and Reserve soldiers reported the same level of satisfaction on two items.

Regular soldiers reported higher levels of satisfaction and lower levels of dissatisfaction than did Reservists in terms of both satisfiers and dissatisfiers. Reservists reported higher levels of dissatisfaction than did Regulars on 6 out of 7 dissatisfiers, four of which were statistically significant. Regulars reported higher levels of dissatisfaction than did Reservists on one dissatisfier but this was not statistically significant. Regulars reported higher levels of satisfaction than did Reservists on 5 out of 8 satisfiers, three of which were statistically significant. Reservists reported higher levels of satisfaction than did Regulars on one satisfier and the difference was statistically significant. Regular and Reserve soldiers reported the same level of satisfaction on two satisfiers.

Of particular interest are the results relating to pay. Regular soldiers report greater dissatisfaction with their pay than any other item. Reserve soldiers report greater dissatisfaction with their pay than any other item except for pension benefits of which they have none.

Perhaps the most interesting result is the effect that seniority appears to have on satisfaction in each of the two components. Among Reservists, reported levels of satisfaction decreased with years service for 7 of the 7 dissatisfiers and 6 of the 8 satisfiers. Among Regulars, reported levels of satisfaction increased with years service for 4 of the 7 satisfiers and 6 of the

8 dissatisfiers.

According to the results, Reservists are less satisfied than Regulars across the board but most particularly with respect to dissatisfiers. It can only be assumed that these higher levels of dissatisfaction are important causes of the high levels of attrition which exist in the Reserves at present. These results will be important as we consider ways to reduce these levels of attrition in later chapters.

The Individual Circle / Part 2

The following sections draw on questions asked in the instrument entitled The Individual Circle / Part 2 as found in Appendix I.

The main contribution of these sections is in terms of clarifying issues raised in the preceding sections. These items do not form part of the individual circle as we have defined it.

We will use individual soldiers self reported levels of satisfaction or dissatisfaction as the dependent variable. We will use the status of the soldier as Regular or Reserve as the independent variable.

Motivation Toward Further Service

Regular and Reserve soldiers were asked to rate their level of motivation toward further service. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .79.

	Very High (5)	High (4)	Medium (3)	Low (2)	Very Low (1)	Mean	SD
Regular	9 (24%)	14 (38%)	13 (35%)	1 (3%)	0 (0%)	3.83	.833
Reserve	56 (24%)	104 (45%)	62 (27%)	5 (2%)	3 (1%)	3.89	.841

Table 6-40: Motivation Toward Further Service

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of their motivation toward further service at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units were not statistically significant.

Likelihood of Continued Service

Regular and Reserve soldiers were asked to estimate the likelihood that they would still be serving at certain points in the future. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .33.

	1Year	2Years	5Years	10Years	20Years		
Regular	3 (8%)	7 (19%)	10 (28%)	11 (31%)	2 (6%)	6.02	4.99
Reserve	16 (7%)	55 (24%)	70 (31%)	46 (20%)	34 (15%)	7.05	6.20

Table 6-41: Likelihood of Continued Service

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of the likelihood that they will continue in the service at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units were not statistically significant.

Effect on Family

Regular and Reserve soldiers were asked to rate the effect of their military service on their family. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .21.

	Very Positive (5)	Positive (4)	Neutral (3)	Negative (2)	Very Negative (1)	Mean	SD
Regular	3 (8%)	7 (19%)	17 (46%)	10 (27%)	0 (0%)	3.08	.893
Reserve	18 (11%)	59 (35%)	57 (34%)	30 (18%)	3 (2%)	3.35	.957

Table 6-42: Effect on Family

We do not have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of the effect that their military service has had on their family at the 5% level.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units were not statistically significant.

Comparison of Military and Civilian Pay

Regular and Reserve soldiers were asked to compare their military pay with what they could make in the civilian world. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .00.

	Much Better (5)	Better (4)	Same (3)	Worse (2)	Much Worse (1)	Mean	SD
Regular	1 (3%)	8 (21%)	20 (51%)	8 (21%)	2 (5%)	2.94	.856
Reserve	8 (3%)	21 (9%)	45 (19%)	112 (48%)	45 (19%)	2.28	.993

Table 6-43: Comparison of Military and Civilian Pay

We have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of how their military pay compares with what they could make in the civilian world at the 5% level. Regular Force personnel report that their military pay compares more favourably with what they could earn in the civilian world than do Reservists.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units were not statistically significant.

Effect of Service on Civilian Prospects

Regular and Reserve soldiers were asked to rate the effect that their military service has had on their civilian career or employment prospects. The results are shown in the following chart. We tested the hypothesis that the two populations are the same in this regard using the chi-square test. The p-value is .05.

	Very Positive (5)	Positive (4)	Neutral (3)	Negative (2)	Very Negative (1)	Mean	SD
Regular	1 (3%)	18 (49%)	18 (49%)	0 (0%)	0 (0%)	3.5	.707
Reserve	19 (8%)	91 (40%)	82 (36%)	34 (15%)	3 (1%)	3.37	.883

Table 6-44: Effect on Civilian Employment Prospects

We have sufficient evidence to reject the null hypothesis that these two populations are the same in terms of the effect that their military service has had on their civilian career or employment prospects at the 5% level. Regular Force personnel report that their military service has had more positive effects on their civilian career prospects than do Reservists.

The difference between the responses of Reservists who were serving in Reserve units and those who were serving in Total Force units were not statistically significant.

Summary Table of Results - The Individual Circle / Part 2

	Regular Force Mean	Reserve Force Mean	Statistical Significance P-value
Motivation Toward Further Service	3.83	3.89	.79
Likelihood of Continued Service	6.02	7.05	.33
Effect on Family	3.08	3.35	.21
Comparison of Military and Civilian Pay	2.94	2.28	.00
Effect of Service on Civilian Prospects	3.50	3.37	.05

Table 6-45: Table of Results - The Individual Circle / Part 2

Analysis - The Individual Circle / Part 2

The questions above formed the instrument entitled The Individual Circle / Part 2 which asked a number of questions designed to clarify responses received on the instrument entitled The Individual Circle / Part 1.

The most interesting results related to pay and pensions. Fully 67% of Reservists said that their military pay was worse or much worse than what they could make in the civilian world compared to only 26% of Regular soldiers who felt that way. This could be expected, as Reserve rates of pay are approximately one half of Regular rates at each rank level.

And yet, in the preceding section, more Reservists expressed some satisfaction or much satisfaction with their rates of pay than did Regular soldiers. This apparent paradox may perhaps be explained by the fact that the wages of Federal employees were frozen in 1992 and that Canadian Forces personnel, both Regular and Reserve, had not received cost of living increases since that year. This could be expected to cause more irritation among Regulars, most of whom are completely dependent upon their military pay, than among Reservists, many of whom have other sources of income.

However, with Reserve pay being much lower than what they could make in alternative endeavours, it seems likely that Reservists who are strongly motivated by financial

considerations will tend to leave the service. It also seems likely that this effect will be most marked among professionals and others with higher opportunity costs.

6.4 The Group Circle

The following sections draw on questions asked in the instrument entitled The Group Circle as found in Appendix I.

The main contribution of these sections is in terms of identifying the factors which allow military teams to satisfy their group needs. We use these concepts to measure the effect that the addition of Regular Force soldiers has on Reserve units.

We will test the hypothesis that Reserve and Total Force units are the same in terms of a number of group factors. We will use the scores given to Total Force and Reserve units on each of these items as the dependent variable. We will use the status of these units as Total Force or Reserve as the independent variable.

Welcoming New Members

Reserve soldiers in Reserve and Total Force units were asked to rate their unit compared to that or other units they had worked with in the past in terms of how well it welcomed new members. The results are shown in the following chart. We tested the hypothesis that Reserve and Total Force units were the same in this regard using the chi-square test. The p-value is .36.

	Much Better (5)	Better (4)	Same (3)	Worse (2)	Much Worse (1)	Mean	SD
Total Force	3 (6%)	16 (30%)	30 (57%)	4 (8%)	0 (0%)	3.33	.705
Reserve	23 (14%)	52 (31%)	75 (45%)	13 (8%)	3 (2%)	3.47	.892

Table 6-46: Welcoming New Members

We do not have sufficient evidence to reject the null hypothesis that these two types of units are the same in terms of welcoming new members at the 5% level.

Discipline

Reserve soldiers in Reserve and Total Force units were asked to rate their units compared to that or other units they had worked with in the past in terms of discipline. The results are shown in the following chart. We tested the hypothesis that Reserve and Total Force units were the same in this regard using the chi-square test. The p-value is .29.

	Much Better (5)	Better (4)	Same (3)	Worse (2)	Much Worse (1)	Mean	SD
Total Force	3 (5%)	17 (30%)	28 (50%)	8 (14%)	0 (0%)	3.26	.774
Reserve	12 (7%)	47 (28%)	64 (39%)	37 (22%)	6 (3%)	3.13	.963

Table 6-47: Discipline

We do not have sufficient evidence to reject the null hypothesis that these two types of units are the same in terms of discipline at the 5% level.

Quality of Training

Reserve soldiers in Reserve and Total Force units were asked to rate their units compared to that or other units they had worked with in the past in terms of quality of training. The results are shown in the following chart. We tested the hypothesis that Reserve and Total Force units were the same in

this regard using the chi-square test. The p-value is .15.

	Much Better (5)	Better (4)	Same (3)	Worse (2)	Much Worse (1)	Mean	SD
Total Force	4 (7%)	25 (44%)	24 (42%)	3 (5%)	1 (2%)	3.49	.782
Reserve	23 (14%)	61 (37%)	53 (32%)	22 (13%)	7 (4%)	3.42	1.02

Table 6-48: Quality of Training

We do not have sufficient evidence to reject the null hypothesis that these two types of units are the same in terms of quality of training at the 5% level.

Leadership

Reserve soldiers in Reserve and Total Force units were asked to rate their units compared to that or other units they had worked with in the past in terms of leadership. The results are shown in the following chart. We tested the hypothesis that Reserve and Total Force units were the same in this regard using the chi-square test. The p-value is .16.

	Much Better (5)	Better (4)	Same (3)	Worse (2)	Much Worse (1)	Mean	SD
Total Force	5 (9%)	25 (44%)	24 (42%)	3 (5%)	0 (0%)	3.56	.732
Reserve	21 (13%)	48 (29%)	74 (45%)	19 (11%)	4 (2%)	3.37	.931

Table 6-49: Leadership

We do not have sufficient evidence to reject the null hypothesis that these two types of units are the same in terms of leadership at the 5% level.

Attitude

Reserve soldiers in Reserve and Total Force units were asked to rate their units compared to that or other units they had worked with in the past in terms of attitude. The results

are shown in the following chart. We tested the hypothesis that Reserve and Total Force units were the same in this regard using the chi-square test. The p-value is .15.

	Much Better (5)	Better (4)	Same (3)	Worse (2)	Much Worse (1)	Mean	SD
Total Force	6 (11%)	19 (34%)	26 (46%)	4 (7%)	1 (2%)	3.44	.851
Reserve	24 (14%)	54 (33%)	53 (32%)	32 (19%)	3 (2%)	3.38	1.01

Table 6-50: Attitude

We do not have sufficient evidence to reject the null hypothesis that these two types of units are the same in terms of attitude at the 5% level.

Morale

Reserve soldiers in Reserve and Total Force units were asked to rate their units compared to that or other units they had worked with in the past in terms of morale. The results are shown in the following chart. We tested the hypothesis that Reserve and Total Force units were the same in this regard using the chi-square test. The p-value is .06.

	Much Better (5)	Better (4)	Same (3)	Worse (2)	Much Worse (1)	Mean	SD
Total Force	3 (5%)	19 (33%)	28 (49%)	7 (12%)	0 (0%)	3.31	.759
Reserve	25 (15%)	46 (28%)	56 (33%)	33 (20%)	5 (3%)	3.32	1.05

Table 6-51: Morale

We do not have sufficient evidence to reject the null hypothesis that these two types of units are the same in terms of morale at the 5% level.

Summary Table of Results - The Group Circle

	Total Force Mean	Reserve Force Mean	Statistical Significance P-value
Welcoming New Members	3.33	3.47	.36
Discipline	3.26	3.13	.29
Quality of Training	3.49	3.42	.15
Leadership	3.56	3.37	.16
Attitude	3.44	3.38	.15
Morale	3.31	3.32	.06

Table 6-52: Table of Results - The Group Circle

Analysis - The Group Circle

The questions above formed the instrument entitled The Group Circle which asked Reserve soldiers in Reserve and Total Force units to rate their units according to a number of factors. Total Force units were rated higher than Reserve units on four items and Reserve units were rated higher than Total Force units on two items. The differences were not statistically significant on any of these items.

There is no evidence that Total Force units perform any better or worse than Reserve units in terms of any of the six factors included in the group circle. There are three possible explanations for these findings.

First, it is possible that the addition of Regular soldiers to Reserve units does not affect the unit's performance on any of the factors discussed.

Second, it is possible that the addition of Regular soldiers to Reserve units does affect the unit's performance on these factors but that these effects take some time to materialise. As this study was undertaken only three months after the arrival of the Regular soldiers it is possible that the effect of the presence of the Regular Force personnel had not yet been felt.

Finally, it is possible, based on the evidence discussed in Chapter 3, that any positive effects which might be hoped for

are realised only under certain circumstances and that the improper implementation of Total Force can eliminate any potential benefits.

6.5 The Task Circle

The following sections draw on two sources of information which was supplied by various headquarters of the Canadian Army. The first of these was the results of the British Columbia District Soldiers Skills Evaluation. The second of these was results of the national Reserve Artillery Competition.

The main contribution of these sections is in terms of demonstrating how it is possible to measure the achievement of the task in the peacetime military. We also attempt to measure whether there are any differences between Regular, Total Force and Reserve units in this regard.

We will test the hypothesis that Regular, Total Force and Reserve units perform the same in terms of the accomplishment of certain objective tasks. We will use the scores given to Regular, Total Force and Reserve units at the BC District Soldier Skills Evaluation and to Total Force and Reserve units at the Reserve Artillery Competition as the dependent variables. We will use the status of the unit as Regular, Total Force or Reserve as the independent variable.

Results of Soldier Skills Evaluation - Raw Scores

Regular, Total Force and Reserve units in British Columbia participated in the 1994 BC District Soldier Skills Evaluation. During this evaluation soldiers were rated, on a pass/fail basis, on their individual skill levels in a number of areas. Units were scored based on the proportion of their soldiers present who passed each of these individual tests. A total score for the unit was then calculated based on the

average of the unit's scores in each of these areas. These results are a good measure of the extent to which the soldiers and units were achieving the task in the specific area of individual infantry skills. The results are shown in the following chart.

	Very High (90-99)	High (80-89)	Medium (70-79)	Low (60-69)	Very Low (0-59)	Mean	SD
Regular		1				82	.0
Total Force	2	1				93.33	3.78
Reserve	1			5	1	67.28	14.94

Table 6-53: Results of Soldier Skills Evaluation - Raw Scores

Unfortunately, we were not given access to the scores of individual soldiers. It is thus necessary to interpret these numbers only in the aggregate. Due to the small numbers of units involved we have not attempted a statistical analysis of the results. Overall, it appears that Regular and Total Force scored higher than Reserve units. However, it should be noted that the Regular and Total Force units participating in the BC District Soldier Skills Evaluation were infantry units while the Reserve units represented the other arms. As the Evaluation tested primarily infantry skills, this could have produced confounding effects.

Results of Soldier Skills Evaluation - Participation

Regular, Total Force and Reserve units in British Columbia participated in the 1994 BC District Soldier Skills Evaluation. Units were assigned participation quotas equal to one half of their total strength and were rated on the number of soldiers who turned out compared to their quota. We believe the participation rate is an important measure of the task of a military unit in peacetime. The results are shown in the following chart.

	Very High (90-99)	High (80-89)	Medium (70-79)	Low (0-69)	Mean	SD
Regular	1				96	.0
Total Force			1	2	57.33	22.30
Reserve	2	2		3	77.28	19.42

Table 6-54: Results of Soldier Skills Evaluation - Participation

Unfortunately, we were not given access to the scores of individual soldiers. It is thus necessary to interpret these numbers only in the aggregate. Due to the small numbers of units involved we have not attempted a statistical analysis of the results. On the surface it seems that Regular units have higher levels of participation than both Reserve units and Total Force units. Reserve units in turn appear to have slightly higher levels of participation than Total Force units.

Results of Reserve Artillery Competition

All Reserve Artillery units are expected to participate in the annual Reserve Artillery Competition. Units are rated on their level of skill in a number of areas. A total score is calculated based on the sum of the scores in each of these areas. The results for the years 1990-91 to 1993-94 are shown in the following charts. Units which were allocated additional Regular Force personnel and designated as Total Force units between Fall 1992 and Summer 1994 have been denoted as Reserve (TF) prior to the arrival of their Regular Force cadre and as Total Force afterwards. These units have been compared with other Reserve units throughout this period. It should be noted that not all units participate in the competition each year.

We tested the hypothesis that these two categories of units performed the same during the 1990-91 Artillery Competition using the chi-square test. The results are shown in the following chart. The p-value is .45.

	Very High (90-99)	High (80-89)	Medium (70-79)	Low (0-69)	Mean	SD
Reserve (TF)	0 (0%)	4 (80%)	1 (20%)	0 (0%)	80.8	6.53
Reserve	1 (13%)	3 (38%)	3 (38%)	1 (13%)	80.12	8.32

Table 6-55: Reserve Artillery Competition - 1990-91 - Collective Readiness

We do not have sufficient evidence to reject the null hypothesis that these two categories of units performed the same at the 5% level.

We tested the hypothesis that these two categories of units performed the same during the 1991-92 Artillery Competition using the chi-square test. The results are shown in the following chart. The p-value is .43.

	Very High (90-99)	High (80-89)	Medium (70-79)	Low (0-69)	Mean	SD
Reserve (TF)	1 (25%)	3 (75%)	0 (0%)	0 (0%)	88.75	5.43
Reserve	1 (17%)	3 (50%)	2 (33%)	0 (0%)	83.00	7.61

Table 6-56: Reserve Artillery Competition - 1991-92 - Collective Readiness

We do not have sufficient evidence to reject the null hypothesis that these two categories of units performed the same at the 5% level.

We tested the hypothesis that these two categories of units performed the same during the 1992-93 Artillery Competition using the chi-square test. The results are shown in the following chart. The p-value is .73.

	Very High (90-99)	High (80-89)	Medium (70-79)	Low (0-69)	Mean	SD
Total Force	1 (25%)	2 (50%)	1 (25%)	0 (0%)	84	6.83
Reserve	1 (14%)	2 (29%)	3 (43%)	1 (14%)	79.85	7.19

Table 6-57: Reserve Artillery Competition - 1992-93 - Collective Readiness

We do not have sufficient evidence to reject the null hypothesis that these two categories of units performed the same at the 5% level.

We tested the hypothesis that the two types of units performed the same during the 1993-94 Artillery Competition using the chi-square test. The results are shown in the following chart. The p-value is .41.

	Very High (90-99)	High (80-89)	Medium (70-79)	Low (0-69)	Mean	SD
Total Force	1 (17%)	3 (83%)	0 (0%)	0 (0%)	85.5	5.16
Reserve	1 (13%)	3 (63%)	2 (25%)	0 (0%)	84.12	7.33

Table 6-58: Reserve Artillery Competition - 1993-94 - Collective Readiness

We do not have sufficient evidence to reject the null hypothesis that these categories of units performed the same at the 5% level.

Summary Table of Results - The Task Circle

	Regular Force Mean	Total Force Mean	Reserve Force Mean	Statistical Significance P-value
Results of Soldier Skills Eval - Raw Scores	82.0	93.3	67.2	NA
Results of Soldier Skills Eval - Participation	96.0	57.3	77.2	NA
	Reserve / Total Force Mean	Reserve Force Mean	Statistical Significance P-value	
Reserve Artillery Competition - 90-91 - CR	80.8	80.1	.45	
Reserve Artillery Competition - 91-92 - CR	88.7	83.0	.43	
Reserve Artillery Competition - 92-93 - CR	84.0	79.8	.73	
Reserve Artillery Competition - 93-94 - CR	85.5	84.1	.41	

Table 6-59: Table of Results - The Task Circle

Analysis - The Task Circle

The results of the BC District Soldier Skills Evaluation and the Reserve Artillery Competition suggest some tentative hypothesis regarding the effects of Total Force.

The Artillery units identified as Total Force were augmented by Regular Force cadres during the 1992-93 and 1993-94 training years. They did not perform discernibly better on the competition during these years than they had during the two years before they had received these augmentees.

The results of the BC District Soldier Skills Evaluation suggest why this might have been the case. While not statistically significant, the results of the BC District Soldier Skills Evaluation suggested that Total Force units may have higher levels of individual task performance but that Reserve soldiers may be less likely to turn out in those units. If these two effects were also experienced in the Total Force Artillery units, and the results reported in chapter 3 suggest that they were, this could have produced roughly counter balancing effects which might have left the scores of Total Force units unchanged overall.

6.6 Interactive Effects

In this section we will test for interactive effects between the various items examined above and, in so doing, we will test the validity of the framework presented in chapter 4. For the convenience of the reader we will re-present below the portions of this framework with which we are primarily concerned.

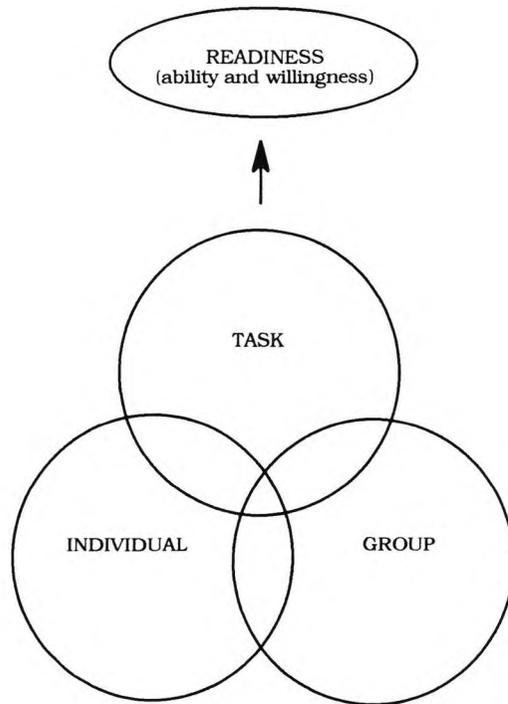


Figure 6-1: Partial Integrated Framework of Military Readiness, Unit Attributes and Battle Outcomes

Readiness is the output of the military organisation in peacetime. Collective Readiness was measured as the number of weeks of additional training a unit would require before it would be ready for deployment into a low intensity combat situation. This question was asked on the instrument entitled Collective Readiness as found in Appendix 1.

Readiness consists of ability and willingness as defined by Hersey and Blanchard. Collective ability and collective willingness were measured by asking Reserve soldiers in Reserve and Total Force units to compare their units with that or other units with which they had served. These questions were asked on the instrument entitled Collective Readiness as found in Appendix 1.

Readiness is impacted upon by the Adair's Three Circles, namely, the individual circle, the group circle and the task circle. The individual circle was measured using an adaptation of Herzberg's work. Fifteen questions relating to the individual circle

Effect of The Three Circles on Collective Ability

We examined the impact of the three circles on collective ability. We analysed these effects using forward stepwise multiple regression where the various items of the three circles are the independent variables and collective ability is the dependent variable. The results are shown in the following chart. The p-value is .000.

The Following Variables were Included in the Model	Multiple R
Quality of Training (Group Circle)	.737
Morale (Group Circle)	.762
Work Itself (Individual Circle)	.770
Results of Soldier Skills Evaluation - Participation (Task Circle)	.777
Discipline (Group Circle)	.783
Efficiency of Military Administration (Individual Circle)	.787
Opportunities for Advancement (Individual Circle)	.794
Results of Soldier Skills Evaluation - Raw Scores (Task Circle)	.796
Sense of Achievement (Individual Circle)	.798
Rates of Pay (Individual Circle)	.800

Table 6-63: Effect of The Three Circles on Collective Ability

The p-value of the regression value is essentially 0, which indicates a strong regression effect. The multiple R value is .800 which suggests the regression model fits our data set quite well.

Effect of The Three Circles on Collective Willingness

We examined the impact of the three circles on collective willingness. We analysed these effects using forward stepwise multiple regression where the items of the three circles are the independent variables and collective willingness is the dependent variable. The results are shown in the following chart. The p-value is .000.

The Following Variables were Included in the Model	Multiple R
Morale (Group Circle)	.687
Discipline (Group Circle)	.722
Attitude (Group Circle)	.733
Welcoming New Members (Group Circle)	.740
Results of Soldier Skills Evaluation - Raw Scores (Task Circle)	.742
Recognition for a Job Well Done (Individual Circle)	.745
Opportunities for Advancement (Individual Circle)	.749
Rates of Pay (Individual Circle)	.753
Quality of Training (Group Circle)	.755
Sense of Achievement (Individual Circle)	.757
Opportunity to Serve Canada (Individual Circle)	.760

Table 6-64: Effect of The Three Circles on Collective Willingness

The p-value of the regression value is essentially 0, which indicates a strong regression effect. The multiple R value is .760 which suggests the regression model fits our data set quite well.

Effect of The Three Circles on Collective Readiness

We examined the impact of the three circles on collective readiness. We analysed these effects using forward stepwise multiple regression where the items of the three circles are the independent variables and collective readiness is the dependent variable. The results are shown in the following chart. The p-value is .000.

The Following Variables were Included in the Model	Multiple R
Opportunities for Personal Growth (Individual Circle)	.216
Opportunity to Serve Canada (Individual Circle)	.303
Leadership (Group Circle)	.328
Quality of Training (Group Circle)	.356
Rates of Pay (Individual Circle)	.380
Results of Soldier Skills Evaluation - Raw Scores (Task Circle)	.391
Relationships with Superiors (Individual Circle)	.400

Table 6-65: Effect of The Three Circles on Collective Readiness

The p-value of the regression value is essentially 0, which indicates a strong regression effect. The multiple R value is .400 which suggests the regression model fits our data set fairly well.

Correlation of Collective Ability, Collective Willingness, Collective Readiness and Collective Performance

We examined the correlation between collective ability, collective willingness, collective performance and collective readiness. The results are shown in the following chart.

	Collective Ability	Collective Willingness	Collective Performance	Collective Readiness
Collective Ability	1.00	.664	.819	-.048
Collective Willingness	.664	1.00	.748	-.104
Collective Performance	.819	.748	1.00	-.037
Collective Readiness	-.048	-.104	-.037	1.00

Table 6-66: Correlation of Collective Ability, Collective Willingness, Collective Performance and Collective Readiness

While collective ability, collective willingness and collective performance are highly correlated each of these correlates poorly with collective readiness. This appears to be due primarily to the high standard deviation of the responses for collective readiness. These results have already been reported before but will be repeated here for convenience.

	Mean	SD
Total Force	13.48	8.55
Reserve	16.97	25.28

Table 6-20: Collective Readiness - Training Necessary for Low Intensity Operations

This question asked all soldiers how many additional weeks of training would be necessary to prepare the unit for low intensity operations. As no Reserve unit has actually done this in the lifetime of anyone presently serving, it is not surprising that the responses vary widely. However, the responses vary much more widely among those with relatively fewer years of service. If we include the responses of only NCOs in the rank of Sergeant or above and officers in the rank of Captain or above, we get much different results. These results are shown in the following chart.

	Collective Ability	Collective Willingness	Collective Performance	Collective Readiness
Collective Ability	1.00	.716	.811	-.374
Collective Willingness	.716	1.00	.827	-.393
Collective Performance	.811	.827	1.00	-.322
Collective Readiness	-.374	-.393	-.322	1.00

Table 6-67: Correlation of Collective Ability, Collective Willingness, Collective Performance and Collective Readiness - Senior Ranks Only

It should be noted that the negative correlations result from the fact that collective readiness increases as the number of weeks additional training necessary decreases. Thus these actually indicate positive correlations between these various variables.

That the correlation between collective ability, collective willingness and collective performance on the one hand and collective readiness on the other are not stronger is not surprising given that collective readiness used an absolute scale while these

other three used relative scales.

Analysis - Interactive Effects

Adair postulated that there are some interactive effects between each of the circles in his Three Circles Model. Although we modified his model somewhat we retained this assumption. This position appears to be somewhat supported by the evidence. However, the magnitude of the interactive effects appear to be small and in none of the cases are they statistically significant.

Each of the three circles appear to have a strong influence on both collective ability and collective willingness. The top four items which impact on collective ability include 2 items from the group circle, 1 item from the individual circle and 1 item from the task circle. The top six items which influence collective willingness include 4 items from the group circle, 1 item from the individual circle and 1 item from the task circle.

Each of the three circles also appear to have a moderately strong influence directly on collective readiness. The top six items which impact on collective readiness include 3 items from the individual circle, 2 items from the group circle and 1 item from the task circle.

Collective ability and collective willingness correlate strongly with each other and even more strongly with collective performance. All three show reasonably strong correlation with collective readiness once junior ranks are dissincluded.

Overall these results offer evidence of the validity of The Integrated Framework of Military Readiness, Unit Attributes and Battle Outcomes.

CHAPTER VII

COMPARATIVE ANALYSIS OF RESERVE FORCES

7.1 Introduction and Methodology

This chapter offers a comparative analysis of a number of aspects of the Reserve Forces of Canada, the United Kingdom and the United States.

Information was gathered through a combination of interviews and written materials. Written documents were gathered from each of the forces studied so as to permit detailed comparisons. Interviews were undertaken primarily in order to answer questions arising from a consideration of these documents or in an attempt to place issues into a broader context.

Details of the Canadian Army Reserve were obtained from a variety of sources. Most documents were acquired by the author in a routine manner in his capacity as a serving officer in the Canadian Army Reserve. When necessary, clarification of the documentation was requested from other serving members with expertise in various specific areas.

Details of the British Territorial Army were obtained primarily through the Directorate of Reserve Forces and Cadets in the Ministry of Defence. Numerous written documents were provided which covered most areas of interest. Personal interviews were conducted with LCol P. Bell and Maj A. Russell of the Directorate. Major Russell also answered a number of follow up questions on the telephone. Details regarding the British operational evaluation were confirmed through telephone conversations with Maj J. Linford who supervised the collection of these operational evaluations in his capacity as staff officer in the G3 office of the Territorial Army. Details

regarding recruiting were obtained through telephone conversations with Maj M. Thomas of the HQ of the UKLF.

Details of the US National Guard were obtained through the Force Integration and Readiness Office of the Washington State National Guard Headquarters. A good deal of written documentation was obtained and in particular a document called the National Guard Almanac proved to be quite helpful. Personal interviews were conducted with Capt R. Sanderson of the above mentioned Force Integration and Readiness Office. Capt Sanderson also answered a number of follow up questions on the telephone.

This practice of combining the use of written documents with the conduct of interviews has proven to be quite practical. The written materials were essential to permit the type of detailed comparisons that we sought to perform. However, it is inevitable that written documents will occasionally fail to cover, in sufficient detail, some of the issues which are of interest to the researcher. And often, an understanding of the context or the philosophy behind a given issue is as important as the raw facts themselves. It has thus been very helpful to be able to combine the use of written material, which is most suitable for the collection of detailed facts, with the use of interviews, which greatly facilitate an understanding of the background and context which underlie those facts.

7.2 Command Structure

The Canadian Experience

Prior to 1988, the Regular Force of Force Mobile Command (the Army) was divided into three roughly Brigade size formations. 1 Canadian Brigade Group was composed of all units located in Western Canada. 5 Canadian Brigade Group was composed of units located in Quebec and the Maritimes.

The Special Service Force was a light air-transportable force, slightly smaller than an ordinary Brigade Group, and was composed of units located in Ontario. While these formations could have together composed a Division, no Divisional headquarters existed to make this a reality. (Another Brigade Group was located in Germany but was not part of FMC.)

The commanders of the two Brigade Groups and the Special Service Force reported directly to FMC HQ as did the commanders of eight bases, five Militia Areas, one training centre, four battle schools, eight independent units and four bands. This system was not considered to be an outstanding success. FMC HQ was implicated in virtually all decisions and was involved in even the most routine communications between the organisations mentioned above. As a result, communications were slow and important decisions often delayed.

A central weakness of this system was the complete separation of Reserve and Regular units at all levels of the chain of command below FMC HQ. The 136 Reserve units were commanded through a two-tier system of Reserve headquarters. The country was divided into 5 Militia Areas which corresponded to the 5 regions of the country, i.e.. British Columbia, the Prairies, Ontario, Quebec and the Atlantic provinces. Each Militia Area was commanded by a Reserve Brigadier-General who reported directly to FMC HQ.

Militia Areas were further subdivided into between two and six Districts. Districts dealt directly with individual Reserve units and were commanded by Reserve Colonels. Reserve units were not twinned with Regular units for either training or administration and any direct communication between them for any purpose was channelled through FMC HQ. An organisational chart of Force Mobile Command prior to 1988 is as follows.

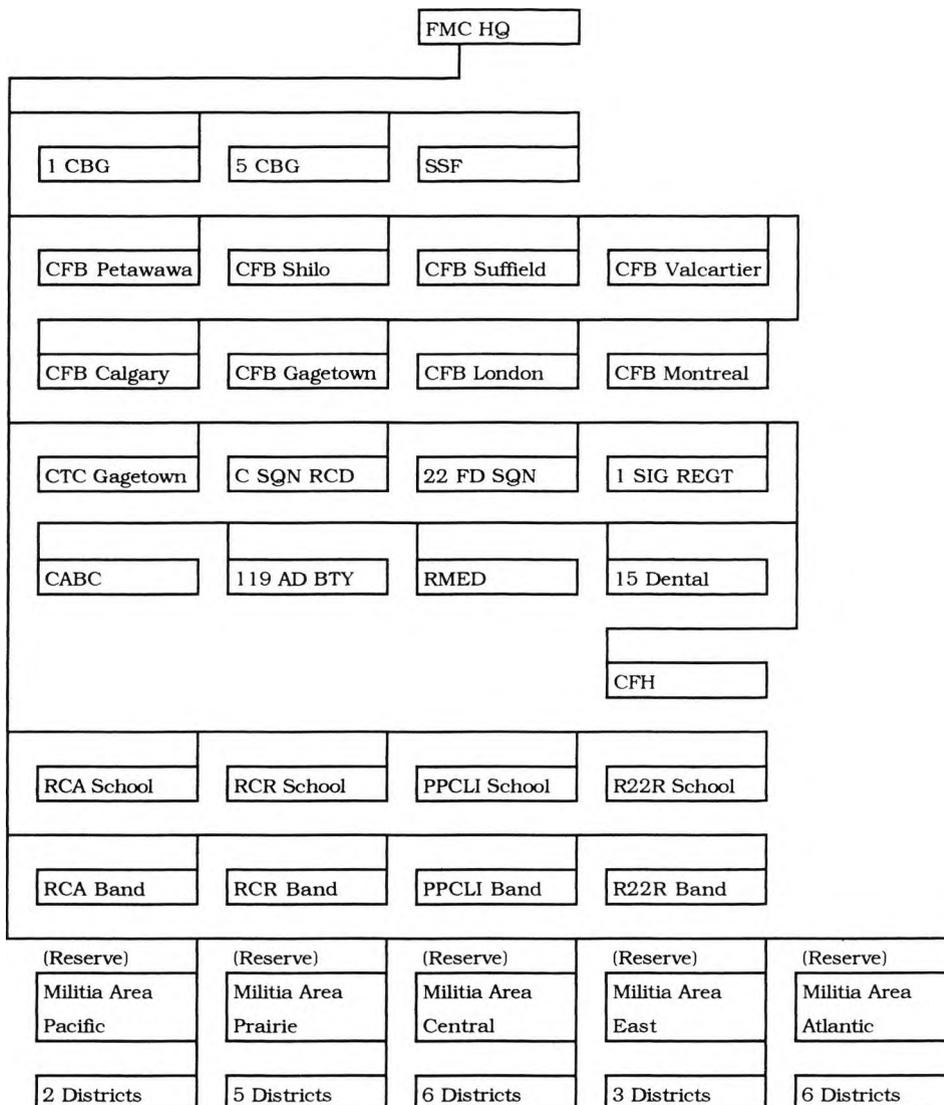


Figure 7-1: The Canadian Army / Force Mobile Command - Pre 1988

The impact of this system on operations, may be understood by considering the following hypothetical scenario. The commander of 3rd Battalion of the Princess Patricia's Canadian Light Infantry, a Regular unit located in Victoria, wished to invite, on exercise, some officers and men of the Canadian Scottish Regiment, a Reserve unit also located in Victoria. He would have had to direct his invitation first to the HQ of 1 Canadian Brigade Group which would pass it on to FMC HQ which would pass it on to the HQ of Militia Area Pacific which would pass it on to the HQ of Victoria Militia

District which would pass it on to the Commanding Officer of The Canadian Scottish Regiment. In order to respond, the Commanding Officer of the Canadian Scottish would then have had to follow the same chain of command in reverse. Needless to say, invitations of this kind were rare.

In 1988, FMC began to reorganise on a regional basis. Under this new structure all FMC resources including Regular and Reserve units, bases, training centres, battle schools, and bands in each region would fall under a single commander and headquarters.

The country was divided roughly as follows. Land Forces Atlantic Area would consist of all FMC resources located in the provinces of Newfoundland, New Brunswick, Prince Edward Island and Nova Scotia. Land Forces Eastern Area would consist of all FMC resources located in the province of Quebec. Land Forces Central Area would consist of all FMC resources located in the province of Ontario. Land Forces Western Area would consist of all FMC resources located in the provinces of Manitoba, Saskatchewan, Alberta and British Columbia. At this same time Force Mobile Command was redesignated as Land Forces Command and FMC HQ was renamed LFC HQ. An organisational chart of Land Forces Command after 1988 is shown on the next page.

Under this new system, Land Force Areas were commanded by a Regular Major-General. The commander would be assisted by a Reserve Brigadier-General who would serve as his deputy. Reserve Area Headquarters were merged into these new organisations which were staffed with Regular Force members supplemented by some Reservists on full time call out.

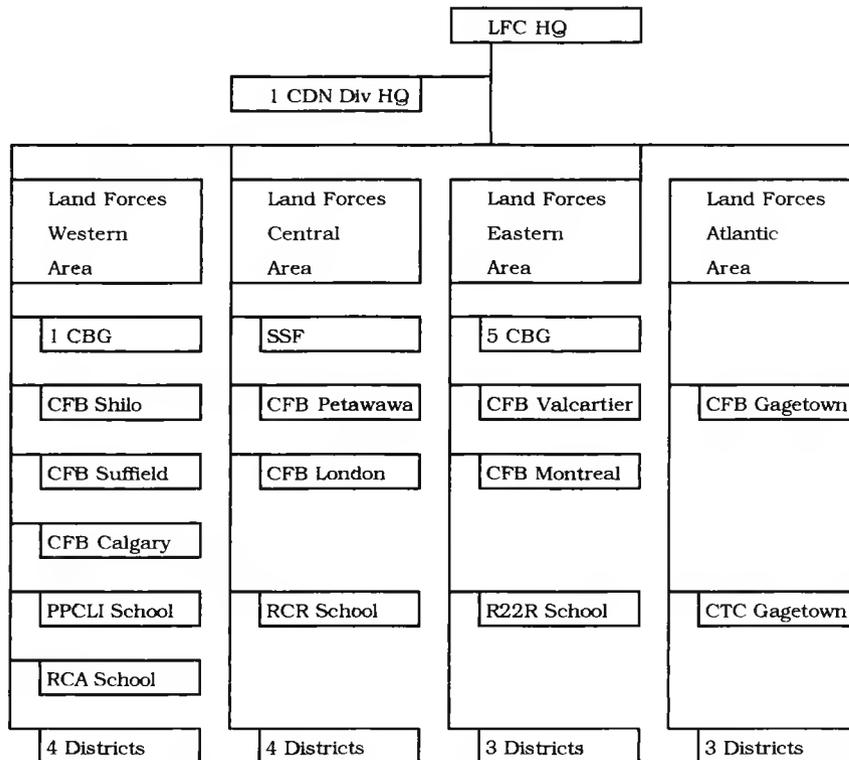


Figure 7-2: The Canadian Army / Land Forces Command - Post 1988

After some consolidation, during which some of the smaller Districts were merged together, 15 Districts remained. The smallest of these had 4 units and the largest had 14 but most had between 7 and 10. Districts were, in other words, roughly Brigade size organisations. British Columbia District was the largest but in most other respects it was fairly typical. It included an Armour Regiment, an Armour Reconnaissance Regiment, two Artillery Regiments, two Engineer squadrons, four Infantry Battalions, two Service Battalions and two Medical companies.

It should be noted that the Regular and Reserve units making up Total Force Infantry Battalions reported through District Headquarters. Regular units and Regular bases, on the other hand, did not report through District Headquarters.

This new organisational structure was designed partially

to increase the opportunity for co-operation and joint training between elements of the Regular and Reserve Forces. Under this system, an invitation to participate in joint training such as the one considered above, would be sent from the commander of the PPCLI to the District HQ which would pass it to the commander of the Canadian Scottish Regiment. This would entail two steps instead of five under the previous system. Just as importantly, these two steps are completed at the local level between people who probably know each other and who work in the same time zone.

Service and support is also supposed to become more efficient under this new system. Base commanders will no longer be accountable to a staff officer in LFC HQ who is concerned primarily with budgets. Rather, they will report to a Major-General whose primary interest is the training needs of his units. In other words, resources will be controlled at the level at which they are to be used.

It should be noted that the operational formations 1 CBG, 5 CBG and the SSF continue to exist within the Area organisations mentioned above. These formations provide headquarters and support elements necessary to deploy Regular Force Brigade size formations.

During the early 1990's the Canadian Brigade Group in Germany was withdrawn from NATO, repatriated to Canada, and disbanded. Except for troops serving with the United Nations, the entire Canadian Army is now stationed in Canada.

A major criticism of the Auditor General (1992: 452) was that Reserve units "cannot conduct field operations above the sub-unit level". Much of the reason for this is that the Reserve is not organised to facilitate training at higher levels. At present there are no standing Reserve Brigade Headquarters. During the past few years, when Reserve Brigades have been

formed during summer exercises, District HQs have been tasked to provide the personnel necessary to create a Brigade HQ. This task is usually rotated amongst the various District HQs in the Area. This expedient, while it may be cost effective, does not provide for any continuity of personnel in the Brigade HQ from year to year. In fact, it almost guarantees there will be none. It also does not create any sort of organisation which could be drawn upon in the case of mobilisation.

The Allied Experience

The British Army is divided, not geographically, but rather along functional military lines. As a European country, the most important potential battlefields for the British Army are right on her doorstep and the defence of her home territory is an essential military aim. As such the British Army is organised according to its actual order of battle.

Most Regular and some Territorial Army (Reserve) units are assigned to the ACE Rapid Reaction Corps. This is a multinational force dedicated to rapid deployment for service with NATO in central Europe. Units assigned to ARRC are stationed in Britain, or in Germany, and are maintained at a high degree of readiness. This force consists primarily of Regular units and is organised into two Divisions.

Units not allocated to ARRC are given national defence tasks which relate primarily to the defence of the British Isles. This includes most TA and some Regular units. These units are also organised into Brigades and Divisions but are seen as second line units and receive slightly lower priority with regard to equipment and training. These Territorial Brigades are commanded by a Regular Brigadier-General while a TA Colonel will hold the job of Deputy Commander. These Brigades are allocated national defence tasks but are also expected to maintain a state of readiness which would allow them to deploy

overseas with minimal additional training.

It should be noted that individual Regular units are rotated through six month emergency tours in Northern Ireland, Belize, Cyprus and the Falkland Islands. Experiments are currently being conducted to determine the feasibility of sending TA units on some of these tours.

The Reserve Forces in the United States are composed of two distinct organisations. The first component is the US Army Reserve which is composed of combat service and combat service support elements which are directly attached to Regular Army formations. Examples would be transport companies, or mobile bath and laundry platoons. In many cases, the individuals in these units perform tasks that are similar to their jobs in the civilian world, and in many cases the support they provide is not normally needed except upon mobilisation. These units report directly through the Regular Army chain of command and are formed, disbanded, or relocated by the Army without regard to local authorities.

The second component of the US Reserve Force is the National Guard which consists of combat units comprising approximately 10 Divisions. The National Guard units in each state are administered by a headquarters commanded by a Major-General who holds the title of Adjutant General. He and his headquarters are responsible for the day to day administration of both Army and Air Force National Guard units in that state. During peacetime National Guard units report through the Adjutant General to the Governor of the state in which they are located. The National Guard is frequently called out to assist with local emergencies such as fighting forest fires, controlling riots or assisting with manhunts.

Notwithstanding the Governors ability to call upon them,

National Guard units are completely funded by the federal government and take their direction with regard to their day to day activities from that level. All units report to the National Guard Bureau which is commanded by a Lieutenant-General and which reports to both the Secretary of the Army and the Secretary of the Air Force through their respective Chiefs of Staff.

Individual National Guard units are assigned to specific Brigades. These Brigades are commanded by a Brigadier-General who sets training and operational objectives. Brigades are not necessarily composed of units in the same state and sometimes contain units in as many as three states. What appears at first glance like duplication between the state headquarters and the Brigade Headquarters is not actually duplication at all. Upon mobilisation, the Brigades would undergo additional training and would deploy to an operational theatre. The state Headquarters would remain behind and begin the process of recruiting and training additional replacements and building new units.

Divisional Headquarters exist in the National Guard organisation but they are skeletons only and it is not felt that these are likely to be used in any capacity. The National Guard Bureau is reconsidering what role these Headquarters should play in the future or whether they should be eliminated.

7.3 Mix of Units

The Canadian Experience

The Auditor General (1992; 432) questions the current structure of the Reserve. He states "we found no documented justification for the existing mix of units, either by type or by number". This section offers a brief description of the types of units found in the Reserve, the weapons they use, the training

imperatives and the costs associated with each.

The artillery specialises in the delivery of indirect fire onto long range targets which are not visible to the soldiers manning the guns. In order to do this, remote observers pass the known or suspected location of the enemy to the guns and calculations are carried out which allow the gunners to hit the target. The branch known as field artillery includes missiles, rockets, howitzers and sometimes heavy mortars. The maximum range of these weapons varies but below Brigade level it will not usually exceed forty kilometres.

Reserve Artillery Regiments are equipped with 105 mm towed howitzers, which, although out of date in some respects, are still used operationally in some parts of the world. Some Regular Artillery Regiments are also equipped with this gun but most are equipped with the more modern 155 mm self-propelled howitzer. The towed howitzer has a shorter range and less killing power but it has the advantage that it is a great deal cheaper to use in training. Costs associated with training on the smaller gun are less than 20% of those of the larger gun and yet soldiers trained on it can be retrained on the larger gun in a matter of days.

The armour is organised around the tank just as the cavalry was once organised around the horse and it exhibits many of the same strengths and weaknesses as its predecessor. The tank is highly mobile and can deliver a devastating blow but only under the right conditions. Most critically, it is limited to operating on reasonably hard, dry, flat ground. Mountains, marshes, dense forests, and cities severely limit the usefulness of the tank.

Perhaps as important as the tactical limitations of the tank are the fiscal limitations. Canada owns 114 Leopard main battle tanks which were purchased in the early 1970s and which

are now nearing the end of their useful life. A new main battle tank can cost as much as \$4 million per copy and operating and maintenance costs can amount to several times its original purchase price during its useful lifetime.

Because of the costs of buying and maintaining the Leopard, Canada was unable to acquire sufficient numbers to meet both operational and training needs. As a result, a number of Regular Force armour units were instead equipped with 'tank trainers' called Cougars. These vehicles resemble tanks except that they are wheeled, have much thinner armour and carry a smaller calibre gun. They are useful for training crews in basic tank tactics but that is about all. These vehicles have high maintenance costs (although not as high as the Leopard) and break down frequently. In fact, in order to keep operating costs down these vehicles have, in recent years, had severe mileage restrictions placed on them.

Some Reserve armour units are 'tank' units and are equipped with Cougars. These 'Regiments' are generally equipped with only a troop (1/3 of a squadron) of these vehicles which means they actually have only 3 or 4 on the ground. This means that unlike infantry and artillery units which can train reasonably at the sub-unit level, the armour is able to train only at the sub-sub-unit level.

Most Reserve armour units, however, are not 'tank' units at all but are instead 'armoured reconnaissance' units and as such are equipped with wheeled vehicles similar to jeeps. They practice the long range reconnaissance, flank security and rapid reaction force tasks for which armoured reconnaissance units are used. These vehicles require relatively simple and inexpensive maintenance, much of which can be performed at the unit level, and they do not suffer from mileage restrictions as do units equipped with Cougars.

The job of the infantry is to close with and destroy the enemy. This means the infanteer fights his battle at short range and dismounted. But while infantry fight on their feet, they increasingly move about the battlefield by other means. Methods of transport can include parachute, helicopter, amphibious landing craft, armoured personnel carrier, tanks, trucks, even bicycles and skis.

Although, they lack the long range hitting power of tanks or artillery, the infantry have their own distinct strengths. Ultimately, it is the infantry which takes and holds ground. For this reason, it is the infantry which is in the greatest demand during low intensity operations and for peacekeeping purposes.

The training needs of the infantry, unlike those of the artillery and armour, are not dominated by their equipment. While Regular Force infantry units are equipped with armoured personnel carriers, and Reserve units use them occasionally, much worthwhile infantry training can be conducted without these vehicles. Some purists would even say that most infantry training is better done without them. As a result, infantry costs less to train than either artillery or armour.

The role of the field engineers is primarily to enhance the mobility of the friendly forces and to restrict the mobility of the enemy. This is accomplished primarily through the laying and lifting of minefields, though the building and demolishing bridges and through the creation and destruction of other obstacles. Most of this requires reasonably inexpensive equipment which is not excessively complex in nature.

Service units exist to provide other units with their first-line logistical support such as resupply of petroleum, food, ammunition, etc. and they do provide these services during one major exercise annually. During the year, however, they attend primarily to their own training and the other units deal directly

with Regular bases for their normal provisions. Unlike the combat arms, most of the jobs in a Service unit, such as cooks, drivers and mechanics, have close counterparts in the civilian world.

Medical units exist to provide emergency medical care to soldiers who are injured during training. The equipment used by front line units is not particularly expensive but the training is fairly complex. More than most other arms, medical units attract many members whose civilian training mirrors that which they are required to undertake in the Reserve.

The overall disposition of the Canadian land forces are as follows:

		REGULAR	RESERVE	RATIO
ARTILLERY	Field and Light	3 Regiments	17 Regiments	1:5.6
	Air Defence	1 Battery	2 Regiments	1:6
ARMOUR	Tank - Leopard	3 Regiments		3:0
	Tank - Cougar		10 Regiment	0:9
	Wheeled Recon		7 Regiments	0:8
INFANTRY		9 Battalions (-)	53 Battalions	1:6.6
ENGINEERS		3 Regiments	18 Squadrons	1:2
SERVICE		3 Battalions	20 Battalions	1:6.6
MEDICAL		3 Field Amb	15 Companies	1:1.66

Table 7-1: Canadian Regular and Reserve Forces
Source: LFC HQ SO3 ORG

It should be noted that the ratios are exaggerated in comparison with those offered below as Canadian Reserve units are understrength compared with comparable units in those other armies. This issue will be dealt with in the next section.

Allied Experience

The overall disposition of the British land forces are approximately as follows:

		REGULAR	TERRITORIAL	RATIO
ARTILLERY	Field and Light	9 Regiments	3 Regiments	3:1
	Air Defence	4 Regiments	3 Regiments	1.3:1
	Observation Post		1 Regiment	0:1
ARMOUR	Tank	9 Regiments		9:0
	Armour Recon	3 Regiments	1 Regiment	3:1
	Wheeled Recon		4 Regiments	0:4
INFANTRY		38 Battalions	36 Battalions	1.05:1
ENGINEERS		10 Regiments	7 Regiments	1.4:1
SERVICE		9 Regiments		0:9
MEDICAL		10 Field Hosp		0:10
ARMY AIR CORPS		6 Regiments	1 Squadron	18:1

Table 7-2: British Regular and Territorial Army
Source: The British Army of the Future and the Territorial Army of the Future

It should be noted that the British approach favours allocating some tasks to Regular units while allocating other tasks to Territorial units. The Territorial Army is heavily weighted in favour of wheeled reconnaissance and infantry while the Regular Army is weighted in favour of heavy armour and artillery.

The overall disposition of the US land forces are as follows:

		REGULAR	GUARD	RATIO
ARMOUR	Tank	1 Division	1 Division	1:1
	Armoured Recon	1 Division		1:0
INFANTRY	Mechanised	4 Divisions	1 Division	4:1
	Light	2 Divisions	7 Divisions	1:3.5
	Airborne	2 Divisions		2:0

Table 7-3: US Regular Army and National Guard
Source: US Army Press Release and US National Guard Almanac

It should be noted that US Regular Divisions would include some Army Reserve units. It should also be noted that the US force is organised two levels higher than the Canadian or British equivalents, that is, at the Division level rather than the Regimental level. US Divisions include all those elements listed by name under the British and Canadian organisation. The National Guard is heavily weighted in favour of light infantry while the Regular Army is weighted in favour of mechanised and airborne forces.

7.4 Size of Units

Canadian Experience

There are 136 Reserve units spread across Canada. Of these, 110 are major units (Battalion size) and 26 are minor units (company size). For simplicity, this discussion will centre on the major units although in most cases the arguments apply equally well to the minor units.

Reserve units are Battalion size organisations in name only. Whereas a Regular unit will consist of a Regiment or Battalion Headquarters and three or four sub-units (company, squadron or battery) the Reserve unit will consist of a Regiment or Battalion Headquarters and in most cases only one sub-unit. Major Reserve units typically have paid ceilings of between 110 and 250 personnel. These limits tend to remain relatively constant from year to year although they can shift up or down over time.

Compare this with the manning level of a full strength Regular Force unit according to current doctrine. An Infantry Battalion consists of 53 officers and 928 soldiers. An Armoured Regiment consists of 51 officers and 702 soldiers. An Artillery Regiment consists of 70 officers and 1151 soldiers. In the case of the infantry and armour, a full strength Regular company or squadron is roughly the same size as an entire Reserve Regiment. In the case of the artillery, a full scale Regular battery is almost half again larger than a Reserve Regiment. It should be noted that in recent years, Regular Force units have typically been 30% understrength compared to their establishment.

Once the Reserve Commanding Officer has set aside positions for his office staff and those who work in the various support trades approximately 30 percent of the total number of

positions have been used. The remainder are allocated to the sub-unit commander who is expected to build an operational company, squadron or battery and is allocated, on average, fewer than 100 positions with which to do it. Furthermore, as Reservists can not be compelled to attend training, the sub-unit commander often finds himself commanding a company, squadron or battery of 40 to 50 soldiers on exercise. On the ground this might mean a battery with three guns, a company with two small platoons or a squadron with two weak troops.

The opportunity to organise realistic training is limited by the small size of Reserve units as most training is conducted in an operational vacuum. Often units decide not to attempt training even at the sub-unit level. For example, an infantry unit might decide to dispense with company level training and instead field one strong platoon. In such a case training would be organised and carried out by Lieutenants. A weekend of training might consist of a dozen isolated platoon level attacks unsupported by another platoon or supporting fire. In such a unit soldiers might be exposed to operations at the company level once in the annual training cycle and then only if they attend the summer exercise. Many essential lessons can not be learned in such an environment.

Having recognised that many units are unable to put even an entire sub-unit in the field, the defence planners have down graded the operational taskings of many Reserve units. Today, many units are tasked to provide only half a sub-unit. Thus, during the annual summer exercise, a Reserve Infantry Battalion will be required to provide one half of a company, an Armour Regiment will be required to provide one half of a squadron, an Artillery Regiment will be required to provide one half of a battery and so on. Sub-units are then banded together. The consequences: key personnel are often displaced from the positions they expect to hold; buddies are separated; and drills developed in each unit over the course of the year

have to be forgotten as they are superseded by new ones. As a result of this turmoil morale suffers and attendance on the same exercise in the following year falls even further.

This process of downgrading operational taskings eventually becomes a self-defeating cycle: in order to save money, positions are cut, but for political reasons the units themselves are left in existence, with only enough soldiers for one sub-unit; units lack the critical mass in personnel and equipment to conduct realistic training and operational effectiveness deteriorates; morale suffers and the best soldiers leave; units have difficulty putting operationally effective sub-units in the field so they are no longer required to do so; instead they are merged with other units for exercises; officers and NCOs lose their positions of influence; morale suffers and again the best soldiers leave.

The Reserve units of today are pale shadows of the proud units from which they are descended. These units have been hollowed out, like a tree which has been consumed by termites, but which continues to stand.

The Allied Experience

British Territorial Army units are maintained at close to full strength. A Territorial Infantry Battalion consists of 528 soldiers divided into three companies. A Territorial Armour Reconnaissance Regiment consists of 653 soldiers divided into three squadrons. On mobilisation, these units would be augmented by approximately 100 ex-Regular soldiers who are liable to call out in the event of hostilities.

The units of the United States National Guard are generally at or over full strength. A National Guard Infantry Battalion would consist of 840 soldiers including 45 officers. A National Guard Armour Battalion would consist of 570 soldiers

including 41 officers. On mobilisation, these units would be augmented by ex-Regular soldiers who are liable to call out in the event of hostilities. The Guard recognises that Reservists can not always make themselves available for training. To ensure that sub-units deploy to the field at full strength they are permitted to recruit and train 5 percent over their allocated strength.

7.5 Demographics and Location of Units

The Canadian Experience

The majority of Reserve units in Canada inhabit armouries which were constructed well over a half century ago. For the most part, these imposing old stone and brick buildings are located in the downtown core of towns and cities across the country. Most were large enough to accommodate the healthy units of three or four hundred soldiers which occupied them during the first part of their life and many are still in such good shape that they could easily continue to perform their current function until well into the next century.

The problem is simply that in many cases these fine old buildings are no longer located where people live. They are surrounded by office towers, retail districts or industry which now occupy the land where houses once stood. The people who lived in these areas have left for the suburbs; the exodus being most noticeable amongst the middle and lower middle classes who have traditionally provided the bulk of Reserve recruits.

In many Canadian cities, historic Regiments compete for the limited number of potential recruits who live in the downtown area while, an hour away, suburban municipalities and townships with populations numbering in the hundreds of thousands are completely bereft of a Reserve presence.

The Auditor General (1992: 450-451) states, "The Department has not analysed how population demographics relate to unit sites... Only two of the seven replacement projects we audited had studied the unit's demographics, and in no cases were data on the unit's community evaluated in terms of the recruiting possibilities."

In one of the few attempts to address this imbalance, an artillery unit in Vancouver established a battery in the Fraser Valley, an area with a population approaching a half a million, where there had previously been no Reserve presence at all. Within eighteen months this new battery had a strength of 76 and provided over half the total strength of the unit. Recruits actually had to be turned away. The lesson is clear. Reserve units must be located in the communities from which they expect to draw their recruits.

The Allied Experience

Both the British and Americans have shown themselves ready to undertake large scale reorganisations of their Reserves when operational requirements dictate.

During a recent reorganisation of the British Army over 40 Territorial units were disbanded, amalgamated, reduced in size or given a new role. In the British case, this had more to do with shifting operational requirements than it did with changing demographic patterns, but it does indicate a willingness to alter the makeup of their forces when circumstances warrant.

The US National Guard determines the optimal location of units based upon two main factors. The first consideration is the adequacy of the population base, both in terms of the number of potential recruits and their skill level. The second consideration is the availability of suitable training areas. In

actual practice this tends to mean that armour units are more heavily concentrated in the South and West, communications units are located near technical universities and artillery units are located near firing ranges.

It should be noted that despite the size of the National Guard, they recognise the importance of demographic factors. This is best demonstrated by the fact that many of their units are actually composed of a number of company sized sub-units which are located in smaller towns and cities. In some cases companies are composed of even smaller platoon sized sub-sub-units which parade in separate towns and villages.

7.6 Regular Force Personnel in Reserve Units

The Canadian Experience

The Regular Force, when it was originally constituted in the 1880's, was intended to serve as the primary repository of military knowledge. It's role was to train the Militia and to set the standards to which they were to aspire. Militiamen were required to attend Regular Force schools in order to qualify for promotion and often were required to serve with Regular Force units for a fixed period before they were eligible for command.

After World War II, members of the Regular Force were, for the first time, attached directly to Militia units. These Regular soldiers were not, however, integrated directly into the Militia units with which they served. Instead, they retained their previous role and continued to act as trainers and advisors to the Militia.

By the 1980's the complement of Regular Force members in Reserve units had grown to include a Warrant Officer who oversaw individual training, a Sergeant who supervised the unit orderly room, a Master Corporal who carried out routine

administration, and a Captain who oversaw these others and supervised collective training and unit administration. These four formed the core of the Regular Support Staff or 'RSS'. Units were sometimes allocated one or two additional positions which were usually filled by Reservists employed on a full time basis.

The reporting relationship of the Regular Support Staff was not entirely clear. While they worked under the direction of the Commanding Officer on a daily basis, they ultimately reported not to him but to a Regular Major who served as the RSS advisor to the District Commander. It was this Major who wrote their personnel evaluations and thus recommended them for courses, promotions and transfers. It was also to this Major that the RSS officer would report in the case of any irregularities which might occur in the unit. This system clearly violated one of the most basic military principles - that of unity of command. It often resulted in inharmonious relations between the Commanding Officers of units and their RSS officers.

With the implementation of Total Force, the RSS system is being phased out. As of September 1992, the Regular Force members who are attached to Reserve units become full members of those units. They will hold operational positions, receive orders through the ordinary chain of command and depend on the Reserve Commanding Officer for their personnel evaluations. In theory the only difference between them and their Reserve counterparts will be that they will work full time rather than part time.

Accompanying this change, is an increase in the number of Regular Force members who are attached to work with the Reserve. A number of units have been selected to become '10/90 units' in which fully 10 percent of the members of the unit will be Regular Force.

Chapter 3 examined the experience of some units during the initial implementation of Total Force. The most important determinant of success seemed to be the extent to which Regular soldiers were placed into line positions. Units which placed their Regular cadre directly into line positions enjoyed an immediate increase in their operational effectiveness. However, this was followed by a gradual deterioration caused by serious morale problems and declining Reserve attendance. Finally, these units suffered from a dramatic loss in operational effectiveness upon the departure of the Regular cadre. Units which placed their Regular cadre into staff positions generally avoided the extreme effects described above. These units enjoyed a more gradual but longer lasting increase in their operational effectiveness.

The Allied Experience

Full time personnel comprise between 5 and 10 percent of the strength of a British Territorial Army unit. A typical Infantry Battalion consists of approximately 500 TA soldiers, 12 Regular soldiers and 16 non Regular permanent staff. A typical Armoured Reconnaissance Regiment consists of approximately 600 TA soldiers, 40 Regular soldiers and 13 non Regular permanent staff. The non Regular permanent staff are TA soldiers, most of whom are retired Regulars, who hold full time positions in the unit on a long term basis.

The tasking of Regular soldiers within Territorial Army units follows a prescribed pattern. The Commanding Officer can be either Regular or TA. In fact, during the summer of 1994, over 70 percent of TA Regiments were commanded by Regular officers. This is a historically high figure which has caused official consternation and efforts are currently being taken to ensure it is reduced.

The unit second in command is always a Territorial. The

operations Captain can be either Regular or TA but he will work full time in either event. The Adjutant is always a Regular. The quartermaster is always a Regular. The Training Major is always a Regular.

The Training Major, who has no clear counterpart in the Canadian Reserve, plays a crucial role in the British system. This officer commands the training staff which consists of the majority (approximately 12) of the Regular soldiers in the unit, and he bears primary responsibility for planning, organising and conducting the unit's training. This represents a fundamental and tremendously important difference between the manner in which British and Canadian Reserves are organised. In Britain, TA soldiers undergo training but, by and large, they do not organise it themselves.

National Guard units also employ a relatively large number of soldiers on a full time basis. A typical infantry unit consists of 840 officers and soldiers including approximately 20 who are members of the Active Guard Reserve. The Active Guard Reserve are Guardsmen who have chosen to make a full time career with the National Guard. They work full time and have essentially the same salary and benefits as soldiers in the Regular Army.

Eight of these Active Guard Reserve soldiers would be employed at Battalion level. One Captain would be employed as the Adjutant. Another captain would be employed as the Training Officer. Two senior NCOs would be employed in each of administration, operations and maintenance. Each company would have three AGR senior NCOs attached to it. One would be employed as a clerk, another as the training NCO and a third as a readiness NCO who concerns himself primarily with personnel matters.

National Guard units are also provided with Regular

Force personnel who assist with training. These personnel are members of a Regional Training Battalion and the group attached to the unit is called a Regional Training Detachment. This detachment consists of a Major, three Captains, a maintenance Warrant Officer, a Master Gunner and approximately five NCOs. These soldiers are supposed to advise the Guardsmen and to provide the technical knowledge necessary to maintain a high level of training. They can be and often are tasked by the Commanding Officer to organise and conduct training within the unit.

There are a number of similarities between the British and American Reserve systems which bear scrutiny. Both the British and American Reserve systems recognise that the central challenge of the Reserve is to create meaningful and challenging training for soldiers. Both recognise that Reserve officers and NCOs can not personally fulfil the recruiting, training, administrative, disciplinary and leadership functions that their units require within the amount of time available during normal parade periods and that some of these functions should be delegated to specialists working on a full time basis.

Neither the British nor the American systems allow for Regular soldiers to take line positions within Reserve units below the level of Commanding Officer. They both maintain that Reserve training should be designed to benefit Reserve soldiers first and foremost and that Regular soldiers attached to Reserve units should facilitate this training and not supplant the Reservists.

7.7 Reserve Augmentation of Regular Force Units

The Canadian Experience

Since the Korean War, Canadian Regular Force units have routinely used individual Reservists to flesh out their

organisations during major exercises and operations. Reservists served with Regular Force units during the annual Reforger Exercise in Germany, went on peacekeeping duty in Cyprus and worked alongside Regular soldiers during major exercises in Canada.

The practice of offering these call outs to Reservists is nothing new. What has changed dramatically in recent years is the number of call outs available and the extent to which the Regular Force depends on the Reserve to provide them with a significant portion of their manpower. Until the early 1990s, relatively few call outs were available and most of those were for Privates and Corporals who were needed to round out top heavy Regular units. Call outs for Sergeants, Warrant Officers and commissioned officers were rare.

The reduction in the size of the Regular Force during the early 1990s changed all that. The elimination of 3 Battalions of infantry, 3 squadrons of armour and 1 Regiment of artillery from the Regular Force organisation, coupled with an increasing number of peacekeeping taskings, has created a gap between the capability and the commitments of the Regular Force. This gap has been filled primarily through increased participation of Reservists. During the 1970s, the Canadian Battalion in Cyprus might have contained 5 percent Reservists. From 1992 to 1994, units deploying to the former Yugoslavia included between 20 and 40 percent Reservists in their ranks. In fact over 4000 Reservists have served on United Nations peacekeeping missions since 1989.

Traditionally, these Reservists were attached to the Regular Force as individual augmentees for use where and how the Regular Force saw fit. But many Reservists are reluctant to serve under these conditions. In order to entice larger numbers of Reservists to volunteer, the Army has experimented with deploying Reservists as fully formed sub-units. During the early

1990s, many of the Canadian Battalions rotated through Cyprus contained one company which was entirely composed of and led by Reservists.

The Canadian Army has also experimented with integrating Reserve infantry companies, augmented by Regular soldiers, into a Regular Battalion organisation on a permanent basis. This experiment has been described in some detail in Chapter 3.

The Allied Experience

The British Army does not use Territorial Army soldiers to augment (the British refer to this as a 'special engagement') the Regular Army on an individual basis to any great extent. In fact there are a number of organisational impediments to it. Firstly, the administrative mechanism for doing this is cumbersome and time consuming. Secondly, a TA soldier on a special engagement is counted against the Regular Army's maximum manpower ceiling for the entire year. As such, in most cases, the Army would prefer to simply recruit a Regular soldier, train him once and keep him. However, these are not the primary reasons why the British do not make a greater use of TA soldiers for individual augmentation of the Regular Army. The British believe that the TA units themselves play an important role in the country's defence and that they should not be denuded to shore up Regular units.

The British are experimenting with the increased use of TA units in operational roles. A TA platoon served in the Falkland Islands in 1994 and was followed by a TA company in early 1995. These deployments are being conducted on a trial basis and will be used to determine to what extent Reserve units will be used on these types of operations in the future.

Soldiers in the National Guard have the opportunity to

accept full time employment with the Regular Army which periodically announces its requirements for extra soldiers. In practice, there tend to be relatively few of these call outs and they tend to be of short duration. This is because any Guardsman who is employed for longer than 180 days is counted as part of the total manpower of the Regular Army. However, most Guardsmen who are looking for full time employment do not look first to the Regular Army but rather to the Guard itself. Full time positions are available within the Guard and these tend to allow the soldier to remain in his own community.

The United States Army views its National Guard as its strategic reserve and by and large it does not seek to pick over its Guard units for individual augmentees. The role of the National Guard is to deploy fully operational units and formations upon mobilisation. During the Gulf War 37,848 National Guardsmen and many times that number of Army Reservists were deployed to the Gulf. Among these, were two Artillery Brigades and dozens of other fully formed units.

7.8 Training Schedule

The Canadian Experience

At the beginning of each fiscal year, a Reserve Commanding Officer is allocated a budget which is equivalent to 44 days pay for each soldier in his unit. The CO has considerable latitude in deciding how he chooses to spend this money but the calculations generally run something like the following. He must first hold back about eight days pay for a week long exercise in the Spring and another eight days for a week long exercise in the Summer. He must also hold back about nine days for three exercises which are conducted on weekends throughout the year. The CO then plans the remainder of his training with the money he has left.

Garrison training follows a fairly predictable routine. During the period September to June, units parade one night per week (equivalent to a half day for pay purposes) and about one Saturday per month in addition to the exercises mentioned above. On a parade night, training generally begins at 1900 hrs and members retire to the mess at about 2200 hrs. On Saturdays, most units train from 0800 hrs until 1600 hrs.

Most of the training accomplished during the year is of a routine nature and could include such topics as a review of small arms handling, map using or military law. The training has a tendency to sink into the tedium of endless review. Worse still, it is often abandoned in favour of make work projects along the line of sweeping the parade square floor. The main reason for this is that those who conduct the training work exactly the same schedule as those who are being trained. Officers and NCOs arrive at 1900 hrs on a parade night, and by the time they have attended to the emergency administration and organised themselves for the evening's training, the night is half over. Of course, a poor turn out among the soldiers can always be used as an excuse to cancel training. And boring training, which is often cancelled, usually leads to a poor turn out. Obviously, this cycle is self-defeating.

To create an environment in which more meaningful training is possible a number of Districts have moved toward a 'new' training schedule in which the soldiers parade during the evening only every second week. Under this system, the evening parade during the 'off week' is reserved for administration and instructor preparation. In practice this usually means that only officers and NCOs parade those nights. The money thus saved is used to train more often on Saturdays and weekends.

As mentioned above, the Reserve generally conducts two one-week exercises each year, one in the Spring and one in the Summer. The Spring exercise was originally timed to coincide

with Spring Break for high school students and Reading Week for university students. Most universities have long since abandoned reading week in favour of ending the term one week earlier and few units have more than 10 percent of their members in high school. This, coupled with the nature of the Canadian winter, leaves in doubt the wisdom of conducting a week long exercise in the Spring. Often, when these exercises are threatened with poor turn out, the majority of the training is scheduled to take place on the first and last weekend.

Units stand down, that is, they don't parade, during July and August with the exception of the week long Summer exercise which is usually run in late August. Qualification courses are organised in each Area during the months of May, June, July and August.

The Allied Experience

The British Territorial Army conducts its garrison training based on a system similar to the 'new' approach described above. Soldiers parade a couple of evenings per month, plus some Saturdays and the occasional weekend. Officers and NCOs parade a little more frequently. Unlike the Canadian Reserve, which conducts two one-week exercises during the year, the British conduct one two-week exercise in the summer. The British Territorial CO is allocated approximately 40 days pay per soldier per year, almost exactly the same as his Canadian counterpart. This varies slightly from year to year and from unit to unit.

Despite the similarities in the overall structure of the training, the British have made several innovations which may be useful in the Canadian context. Many British units have sub-units which are located in different towns. Where this is the case, the sub-units do not parade on the same night. This is done so as to gain maximum benefit from the time and

experience of their Regular cadre and it creates some interesting opportunities for innovative and creative training.

At the beginning of the training year, the unit training plan spells out what training will be conducted during which parade periods. Responsibility for the training is then divided up. Sub-unit commanders are made responsible for conducting some of their own training, but responsibility for much of the rest, particularly that which is organised at the Regimental level, lies with the Regular training cadre. The Regular cadre develops high quality training which they then conduct at each of the sub-unit locations in turn during a given week.

This system ensures high quality training while minimising the time spent on preparation. It recognises the time limitations inherent in Reserve service and acknowledges that sub-unit commanders can not recruit, train, administer, lead, and discipline their units and do it all in a few hours per week. By taking some of the training burden off the back of the sub-unit commander, he is permitted to focus his attention on his other responsibilities.

This is not the only innovative use that the British have found for their Regular cadres. Recognising that civilian obligations often prevent soldiers from attending training, Territorial units usually try to hold each training exercise on more than one weekend. For example, an exercise devoted to small arms firing might be organised on two succeeding weekends. A soldier would need to attend only one of the two, and by organising the training in such a manner, the British double the chance that an individual soldier would be able to fit the training into his own personal schedule.

The US National Guard trains approximately 44 days per annum. This training is organised quite differently than the Canadian model. Units train one weekend per month (Friday

night to Sunday afternoon) during eleven months per year. During the period between these exercises, the only major activities are Battalion and company level orders groups during which information is passed on relating to the next exercise. Units then train for two uninterrupted weeks (sixteen days) during the Summer.

As can be inferred from the training schedule described above, many activities which are undertaken by Reserve officers and NCOs in a Canadian Reserve unit are undertaken by full time staff in the National Guard. Most of the unit administration and much of the detailed organisation of exercises is conducted by full time personnel. This allows Guardsmen at all levels to concentrate their efforts on operational training.

7.9 Recruitment and Enrolment Standards

The Canadian Experience

Prior to 1986 the Regular and Reserve recruiting systems were completely separate. Regular Force recruiting was done through a network of regional Canadian Forces Recruiting Centres (CFRC) and Reserve recruiting was handled by the individual Reserve units.

As part of the implementation of Total Force, Regular and Reserve recruiting was rationalised during the years 1986 - 1992. In practice, this meant CFRCs were given the responsibility for processing applicants for the Reserve and Regular standards were incrementally applied to Reserve applicants.

The following chart shows the process which a Reserve applicant would have gone through prior to 1986 and that which he would have gone through by 1992. Under the old

system it was possible for a recruit to make his application, write a 30 minute aptitude test, undergo his medical exam, be interviewed and finally be sworn in all in one night. Because all stages of the process were conducted within the unit, Reserve units were able to accept an applicant, and offer him a chance to prove himself, even if he was slightly deficient in terms of the formal requirements.

RESERVE RECRUITING -1986-	RESERVE RECRUITING -1992-
Applicant Makes Contact With Unit	Applicant Makes Contact With Unit
Applicant Collects Info and Documents	Applicant Collects Info and Documents
Unit Makes Conditional Offer	Unit Gives Applicant Referral to CFRC
	Applicant Makes Application at CFRC
	Security Check Is Initiated
Unit Administers Screening Test	CFRC Administers Screening Test
Unit Administers Medical Exam	CFRC Administers Medical Exam
Applicant is Interviewed By Unit Officer	Applicant Is Interviewed By Career Counsellor
	File Is Sent To Reserve Unit
Applicant Is Sworn In	Applicant Is Sworn In

Figure 7-3: Reserve Recruiting Procedures - 1986 and 1992

Under the new system, the process became much more complicated. A potential recruit would first visit a unit where he would be given a number of forms to complete and a list of

documents to obtain. Once he had filled out the forms and collected the documents he would take them to CFRC. Any missing documentation would result in his application being refused at this stage and he would have to return later. Assuming his documentation was complete, the applicant would be contacted by CFRC some weeks later and offered an appointment to write a 3 hour psychological and aptitude test. If the applicant these tests, and his security check proved satisfactory, he would be contacted by CFRC again some weeks later and offered an appointment for a medical exam. If the applicant proved to be medically fit he would then be contacted again by CFRC and offered an appointment for an interview with a military career counsellor. If the applicant passed the interview his file would be sent to the unit. Upon receipt of the file the unit would contact the applicant who would then be sworn in. This process takes anywhere from three to six months. Under this system, Regular recruiting requirements are being applied rigorously to all applicants, Regular and Reserve, and individual units have no way of accepting someone who is deficient in any of the formal requirements.

The objective of this new system is to ensure that all recruits, both Regular and Reserve, meet the same high standards. By common agreement, this new system has raised the quality of Reserve recruits but at the cost of a corresponding decline in their numbers. And not all those who are lost are deficient. Reserve applicants, many of whom are students looking for a means of paying their way through school, find the process unnaturally long and many find other jobs before completing the recruiting process.

The Allied Experience

Responsibility for recruiting in the British Army is divided in a manner similar to what was done in the Canadian Army prior to 1986. The recruiting for the Regular Army is conducted

centrally at British Army recruiting centres. Territorial Army units conduct their own recruiting. Minimum standards are identical between the two components but TA units are allowed considerable latitude in the application of those standards. TA recruiting is handled by a Regular soldier or a Reservist on a full time basis.

The minimum standards for acceptance into the US Regular Army or National Guard are identical. However, the application of these minimum standards can vary widely. Regular soldiers are recruited through Regular Army recruiting depots and requirements are rigidly applied. Guardsmen however, are recruited within the unit by recruiters who handle all the paperwork themselves and have the authority to make decisions with regard to the application of specific requirements. Regular Force recruiters are attached to work with Army Reserve and Guard units and recruiters are responsible for meeting a quota and for providing the unit with a certain number of recruits.

7.10 Training and Promotion Policies

The Canadian Experience

The implementation of Total Force has occasioned the wholesale re-evaluation and rationalisation of Regular and Reserve Force training standards. In 1991, the first step in this process was taken when most Reserve courses were renamed to correspond with their Regular Force equivalents.

Prior to 1991, courses for non-commissioned members in the Reserve were generally between one tenth and one quarter as long as their Regular equivalents. It was determined that this differential was too large and it was decided that efforts should be made to reduce it. The main factor which has always limited the length of Reserve courses is the fact that most Reservists

attend them during their annual vacations which are usually limited to two weeks in duration. As a result, the only practical way to increase the level of training made available to Reservists has been to increase the number of two-week courses required for promotion to each rank. Of course, if too many courses are required, the Reservist will need to take one virtually every year, in which case he will have no time left over to attend the annual Summer exercise. Herein lies the dilemma.

This dilemma has not been resolved although concrete steps have been taken nonetheless. For example, in the Artillery, the training to become a command post technician in the Reserve has been increased from one two-week course to three two-week courses and the training to become a Troop Sergeant Major has been increased from one two-week course to four two-week courses. These two changes are typical of what has been done in each of the combat arms. In some cases where the length of Reserve courses have been judged sufficient, the length of the corresponding Regular course has been reduced.

At the junior officer level, two training options exist. Under the RESO program Reserve officers who are enrolled in university can qualify to the rank of Lieutenant by attending the same courses as their Regular counterparts. These courses last for approximately 3 months each and must be taken two Summers in a row. Under the MITCP program, officers who are unable to attend such lengthy courses can qualify to the rank of Lieutenant by taking a series of six two-week courses. Graduates of the RESO program are eligible for transfer directly to the Regular Force while MITCP graduates are not.

At the senior officer level, the same courses are generally required for promotion in each of the two components, although the Regular versions still tend to be much longer. The only important asymmetry between the training required for promotion in the two components is that attendance at the

Command and Staff College is required for promotion to Major in the Regular Force but is required only for promotion to Lieutenant-Colonel in the Reserve Force.

Although Reserve courses are still generally somewhat shorter than their Regular equivalents, the differential has been greatly reduced. Standards have improved dramatically since the 1960's and 70's, when Reserve courses tended to focus on routine unit administration and secondary duties such as civil defence preparedness. It should also be noted that vacancies on Regular courses are often made available to Reservists who can afford the time from their civilian responsibilities to attend.

No discussion of training would be complete without some description of the manner in which courses are actually run and the process by which soldiers are nominated and loaded onto courses. This is one of the most unsatisfactory aspects of the Canadian Army Reserve. Courses are run by Land Force Areas during the Summer months of May, June July and August. This has been done without major change for generations and yet the same lapses in planning occur year after year.

Courses which should be run consecutively often are not. Progression from one course to the next is often fouled up by overlapping course dates. Basic training courses begin and end without reference to the fact that most soldiers taking them are high school students and are available only from late June.

Soldiers must submit their names for courses by February, however, they are seldom told that they have a confirmed place on a course more than two weeks before it begins. Soldiers who are also full time students have to decide whether to look for a summer job or hope for the best with the Army. Those who put their faith in the system, and don't look for a job, are often disappointed to learn at the last minute that they are not loaded onto the course they asked for or that the

course has been cancelled. Often the best soldiers, who are also the brightest students, quit the Reserve because they simply have to earn money for school and cannot take the financial gamble inherent in planning their summer around the military.

For many years the worst effects of these failures were mitigated because soldiers were permitted to combine taskings with courses in the same summer. Under this system a soldier would receive a tasking to work on a certain base for the entire summer. He might work as an instructor or a driver or a storeman. During the Summer, however, the soldier could be excused from his tasking for a period to take one or more courses. This allowed Reserve soldiers the certainty of a full Summer employment coupled with the opportunity to undertake additional training. This practice was discontinued a number of years ago because it took too much work to administer. At present, soldiers can take either a tasking or courses but not both. As a result many soldiers take neither.

In order to be promoted, a soldier must complete a certain minimum amount of time in his current rank as well as pass the required courses. The minimum time in rank requirements for eligibility for promotion are similar between the Regular and Reserve Forces with one exception. A Reserve Private can attain the rank of Corporal in as little as two years while his Regular counterpart must spend over six and a half years in the service before he is eligible for promotion to that rank. This differential is made up partially in the following years. To progress from Corporal to Chief Warrant Officer, the Reservist would require an additional 14 years service while the Regular Force soldier would require only 12 additional years. Of course, in practice, few soldiers achieve the rank of Chief Warrant Officer in any thing close to these minimum time frames in either component.

Time in rank requirements among officers are virtually identical between the two components. While the years required

in individual ranks differ slightly, both Regular and Reserve officers would require a minimum of 11 years service before they could be eligible for promotion to Lieutenant-Colonel. This is seldom accomplished so quickly in either component.

Proficiency in the combat arms tends to depend on the amount of time spent in the field perfecting the knowledge gained on courses. Of course this is equally true in the Regular and the Reserve Forces. To the extent that the Regular soldier would normally spend more time in the field during an average training year, he has certain advantages over his Reserve counterpart. However, this advantage is somewhat offset over his career as Canadian Forces personnel policies require Regular officers and NCOs to accept periodic extra-Regimental postings in administration, staff or recruiting. Regular soldiers can find themselves posted out of their units for 2 - 3 year periods during which they have no opportunity to practice their trade. Reservists do not suffer from this particular policy.

The Allied Experience

The courses offered to Territorial Army soldiers are condensed versions of those offered to their Regular counterparts. They are limited to two weeks in duration although occasionally more than one course is required before an individual is qualified for promotion to the next rank. Time in rank requirements for eligibility for promotion are roughly equivalent between the Regular Army and Territorial Army.

Most soldiers join the National Guard while still enrolled in high school, college or university and undertake two to four months training each summer over a number of years. The Reserve Officer Training Corps has been a fixture on campuses for many years. Under this system students receive financial assistance to continue their studies in exchange for a commitment to undertake training and to serve for a fixed

number of years after graduation. A similar program exists for promising NCOs. As a result, most officers and NCOs have completed the bulk of their military training before they begin to undertake the challenges of establishing a career.

Course requirements for promotion in the National Guard are substantially the same as those in the Regular Army. By 1995 they should be perfectly aligned. The problem of offering the same training to Regular and Reserve soldiers has been solved to some extent by packaging much training into home study modules. Under this system, both Regular and Reserve soldiers are required to complete some courses on their own time. This offers several important advantages. Firstly, it reduces the costs of training in both components. Secondly, it allows the Reservist to complete more training in any given year than would be possible if he were restricted only to vacation periods. Thirdly, it allows more ambitious officers and NCOs the opportunity to complete more courses in a shorter period of time. In most cases, the home study modules are followed by formal courses which concentrate on confirming the knowledge already gained. It should be noted that soldiers who complete homestudy packages are paid according to the estimated amount of time required for the completion of the package.

7.11 Pay and Benefits

The Canadian Experience

Pay and benefits in the Regular component of the Canadian Forces are among the best in the world. Corporals earn in excess of \$32,000 per annum and Majors in excess of \$56,000. All personnel are entitled to pensions after twenty years service. Environmental allowances, which are often in excess of \$200 per month, are authorised for service at sea or in the field. These attractive salaries, pensions and benefits are felt to be necessary in order to entice top quality individuals to

first join and then stay in the Regular Force.

The value of money as a motivator is well understood in the Canadian Forces, at least as it relates to the Regular Force. The part it could play in attracting and retaining individuals for service in the Reserve, however, does not appear to be equally well understood. At most rank levels Reservists are paid less than half as much as their Regular Force counterparts. Environmental allowances are authorised in the Reserve, however, they are seldom paid. There are no pensions or gratuities of any kind accruing to a Reserve soldier for long or distinguished service.

The following chart outlines the discrepancy between Regular and Reserve rates of pay. It compares the full annual pay of Regular Force members and the full annual pay which would be earned by a Reservist if he were to work full time at daily rates (assuming 227 working days per year as is typical in the Regular Force).

	Regular Annual Pay	Reserve Annual Pay
Private - Recruit	\$14,568	\$10,006
Private - Basic	\$15,144	\$11,477
Corporal	\$32,772	\$13,701
Master Corporal	\$34,140	\$15,097
Sergeant	\$37,644	\$16,425
Warrant Officer	\$41,952	\$18,005
Master Warrant Officer	\$46,284	\$20,075
Chief Warrant Officer	\$51,384	\$22,014
Second Lieutenant	\$28,908	\$12,743
Lieutenant	\$29,316	\$16,893
Captain	\$42,096	\$21,229
Major	\$56,916	\$28,565
Lieutenant Colonel	\$65,964	\$34,658

Regular Force rates based on monthly basic pay scale effective 01 April, 1992.

Reserve Force rates based on daily basic pay scales effective 01 April, 1992 assuming individual works 227 days per annum as is common in the Regular Force.

Table 7-4: Regular and Reserve Rates of Pay

The destabilising effects of this situation can be placed in stark relief when examined in detail. A Lieutenant-Colonel in the Reserve is paid at roughly the same rate as a Regular Master Corporal. Master Warrant Officers in the Reserve are paid more than Regular Force Privates but less than Regular Force

Corporals.

This differential does not appear to be based on the commitment of Reservists or on their level of training but rather appears to be historically based. In other words, that's just the way it has always been. The impact on morale however, is clear, Reservists conclude that their rates of pay reflect the level of esteem in which they are held by their government. They feel that by setting their level of pay so low the government is sending them the clear message that their contribution is not valued.

Low levels of Reserve pay has the effect of increasing the cost of membership in the Reserve. Few Reservists, earn less in their civilian jobs than they do in the Reserve. As a result, when soldiers decide whether to continue in the Reserve, or when they decide whether to attend a given exercise, they often think not in terms of how much they are earning but rather in terms of how much it is costing them. For example, someone who earns \$200 per day as a carpenter and \$72 per day as a Sergeant in the Reserve has to give up \$128 in income to parade on a Saturday or \$1024 in order to attend an eight day exercise. Few people wish to serve their country that badly.

Rates of attrition in the Reserve reach as high as 40% per year among new recruits. The problem of attrition, which has plagued the Reserve since time immemorial, is at least partially financially induced. The conditions of service in the Regular Force are no more pleasant than those in the Reserve. Why then does the Regular Force have such low turn over in comparison to the Reserve Force? Because it pays well?

Of course not all soldiers quit the Reserve because of the poor pay. Some stay. However, anecdotal evidence suggests that the soldiers who quit the Reserve for financial reasons tend to be those with the highest opportunity cost; that is, they tend

to be the best educated, hardest working, most intelligent and most capable. The soldiers who remain tend to be those with the most limited alternatives.

A related issue is the requirement for a Reserve pension programme. One of the main financial incentives to service in the Regular Force has always been the generous pension enjoyed upon retirement. Examination of the Regular Force pension plan reveals a scheme with the following features. Regular soldiers pay approximately 6 percent of their income into the plan. Upon retirement they collect a pension equivalent to 2 percent of their last years salary multiplied by their number of years service. Quick calculations reveal that this plan is basically self financing. Reservists, many of whom have made family and career sacrifices as a result of their service, wonder why a similar plan could not be made available to them. In fact a Reserve pension plan was submitted to Treasury Board in the early 1990's. It was approved but not implemented because of a government wide salary freeze. Details of this plan are unavailable.

These low rates of pay and benefits in the Reserve have undesirable consequences on morale and discipline. At present there is little concrete incentive to Reserve service and everyone knows it. As a result, Reserve officers have little power over their NCOs and Reserve NCOs have little power over their soldiers. Orders of an immediate nature such as 'pick that up and put it down over there' must be obeyed. However, orders of a less immediate nature can be safely ignored. A soldier, NCO or officer who is told to perform a certain duty three weeks hence can simply phone in and say he can't come in that night. Little will done to him. Most units have too few soldiers to throw any out.

The Allied Experience

The British Territorial Army soldier is paid at a daily rate which is six percent lower than a Regular soldier of the equivalent rank. However, the Reserve soldier is eligible for a bonus called a bounty if he completes a certain amount of required training during a given year and attends the entire two week summer exercise. This bounty is equivalent to 250 pounds, 525 pounds and 775 pounds in a soldier's first, second and third years respectively. These bounties, if earned, more than make up for the initial discrepancy between Regular and Reserve rates of pay.

There are no pension benefits available to members of the Territorial Army. The issue, however, is under consideration at present.

The British report rates of attrition in the TA as being approximately 20 percent per annum among new recruits and much lower for more experienced soldiers.

Detailed comparisons between rates of pay for American service personnel in the Regular Army and the National Guard are difficult because of the complex formula used to determine pay and the number of allowances for which soldiers are entitled. Overall, however, guardsmen appear to be paid at approximately the same rate as their Regular Force counterparts. Perhaps more importantly, they believe that they are paid fairly in comparison. National Guard soldiers are paid approximately twice as much as Canadian Reservists once allowances are made for exchange rates.

National Guard personnel are entitled to pensions. Eligibility begins when a Guardsman has served in the military for 20 years, has worked at least 25 days in each of those years and has served his last eight years in the Guard. National

Guard pensions are calculated as follows: Points are allocated for each day of ordinary service up to a maximum of 60 points per year. One point is also allocated for each day of active duty (full time) service with no limit. The total number of points accrued during a career are added up on retirement and divided by 360. The resulting figure equals the total number of 'years' service the individual is deemed to have completed and this figure is multiplied by 2.5 per cent. The resulting figure is then multiplied by the basic monthly rate of pay of the member at his current rank. The resulting figure represents the monthly pension payment earned by the individual.

The pensions earned are not inconsiderable. A Lieutenant-Colonel who had served in the National Guard for 24 years and on active duty for 6 years would receive a monthly pension of \$1285. A Major who had served in the Guard for 20 years but who had never served on active duty would receive \$429 per month. The main difference between pensions in the Guard and those in the Regular Army is that Guard pensions are payable only once the individual has reached 60 years of age, whereas Regular pensions are payable as soon as the individual has left the service.

The financial incentive of these pensions is obvious. What is less obvious is that their existence has important effects on the attempt to create a Total Force environment. As a result of this system, Regular officers and NCOs, who choose to end their Regular service before 20 years can do so without losing the opportunity to earn a pension. They can simply transfer to the Guard and transfer their pensionable time. Similarly, a Guardsmen can choose, later in his career, to take a full time job with the Guard or the Regular Army without sacrificing his long term financial security.

The Americans report rates of attrition in the National Guard as being approximately 18 percent of total strength per

annum.

7.12 Operational Evaluation

The Canadian Experience

As discussed in Chapter 4, the Canadian Army has devised few reliable means of measuring the readiness of its units and formations. In this section we will describe three programs which attempt to do this at present and we will analyse the problems inherent in each of them.

All Regular and Reserve units are presently subjected to an Annual Technical Inspection (ATI). This takes place over a period of several weeks with various areas of a units activities receiving scrutiny according to a preset schedule. During this time the unit spends most of its energy attempting to get its equipment and paperwork into perfect condition. In effect the entire armoury is stripped, cleaned, polished and reorganised. The magnitude of this effort results in a near halt of training for weeks at a time. Vehicles and equipment, once cleaned, are grounded. It may be true that this process forces units to maintain their equipment and clean out their filing systems. It is also true that much time is wasted on pointless projects such as painting shovels and polishing radios.

It should be noted that the Annual Technical Inspection covers only administration and maintenance. It does not deal with operational effectiveness, training or even the manpower strength of the unit. And no other inspection or report does cover these areas. As a result, because the ATI is the only score given to the unit during a given year, the result takes on excessive importance. Many Commanding Officers, eager to demonstrate their capabilities in the only way open to them, get actively involved in the preparations for the ATI. In so doing they make it clear that the ATI takes precedence over other

activities - such as training.

The artillery is the only branch which conducts any sort of an operational evaluation. This takes the form of an annual competition during which the firing battery of each unit must undertake certain basic tasks. The batteries are judged in a number of areas using a pass/fail scoring system. An example would be 'Did the GPO brief his detachment commanders on the local defence plan' - Yes or No. There is little room for interpretation and no more points are allocated for doing a job well than for doing it poorly. All that matters is that it was done.

This system obviously has limitations, however, most units participate and take it in good spirit. This is the only exercise during the year when a unit is observed and debriefed by outsiders and most units find that to be of real value. This having been said, the results of the competition itself are regarded with little better than wry indifference. It has long been remarked that some units seem to consistently receive better scores than other units and that often these 'top' units are those which are located near the Regular units who provide the marking teams. The suspicion among more remote units is that familiarity and social ties are as important to the final score as is performance.

A number of Land Force Areas have begun experimenting with a program designed to focus attention on basic soldier skills. In British Columbia District this took the form of an exercise called The Soldier Skills Evaluation. This evaluation is conducted over a weekend and is concerned with assessing the individual skills (primarily infantry) which are considered relevant at various rank levels. All ranks are assessed on the following skills: Personal Weapons Handling, Battle Craft, First Aid, Communications, Physical Fitness, Navigation, and Nuclear, Bacteriological and Chemical Defence. Officers are

also assessed on the preparation of a combat estimate and the preparation of orders. NCOs are also assessed on range and training safety, and equipment inspection. This evaluation takes place in late November and unit training is focused on these areas during the entire Fall. Units are required to achieve a pass rate of at least 50% of their total strength at this evaluation before they are permitted to begin collective training. This program has proven itself to be a successful means of ensuring that basic soldier skills are maintained. However, it does not attempt to address questions as to the collective readiness of a unit in an operational context.

The Allied Experience

The British, until a few years ago, conducted an evaluation called an ARU which was similar in principle and effect to the Canadian ATI. They experienced the same problems as described above and cancelled it.

The British now conduct an Operational Evaluation which attempts to address a broader range of questions such as the level of manpower and equipment availability in the unit in the current year versus the previous year. Note that equipment availability indicates 'ready for operational use' not 'clean and shiny'. Units also report the percentage of the personnel in their units who have passed refresher training in the following areas: Personal Weapons Handling, First Aid, Armoured Fighting Vehicle/Aircraft Recognition, and Nuclear, Bacteriological and Chemical Defence, and three other tests specific to arm. Units report on the number and type of collective training exercises undertaken and the percentage of the unit that participated in each one. Units report on any inescapable commitments which have affected their ability to conduct individual or collective training. Units report on the number of discharges which have occurred at various rank levels. Finally, units are required to report on the percentage of

soldiers at each rank level who have qualified for bounty. It should be noted that this system calls for self reporting of most information. Officers in charge of the central collection of this information state that they are aware that the system is open to some abuse. However, they insist that it is still a marked improvement on the previous system because at least it measures, and therefore directs attention toward, things which are actually important to the operational readiness of a unit.

The US Army conducts an evaluation program called the Army Training Evaluation Program (ARTEP) during which units are run through a simulated operation and soldiers are required to complete a number of mission essential tasks. Officers familiar with this training claim that the results fairly represent the effectiveness of a unit and that units take pride in the results. No better recommendation can be given.

The United States Army has also made great strides in creating mechanised combat simulations. The Multi-Purpose Range Centre (MPRC) is a computerised combat simulation in which infantry and armour units are committed to mock combat either in the offence or the defence and the unit's ability to fight is measured mechanically and electronically. In the advance, targets are mechanically raised and lowered and the troops fire at them. These targets remain up for a certain limited period of time and the number of hits are recorded by computer. Some of these targets move on tracks to simulate mobile targets. In the defence a similar procedure is used. Targets pop up in the distance and troops are able to fire their long range weapons at them. As the battle continues, targets pop up at closer and closer distances and troops engage with progressively shorter range weapons. Again the computer keeps track of hits.

There are some who criticise this type of training as being too predictable and certainly units which have been through it a number of times are likely to perform better than those which

have not. However as an assessment technique for determining which areas need most work it is without parallel.

CHAPTER VIII

POLITICAL, ECONOMIC AND SOCIAL CONTEXT

8.1 Introduction

As suggested in The Integrated Framework of Military Readiness, Unit Attributes and Battle Outcomes the performance of the military organisation can really only be measured in the crucible of battle. As noted, estimating the amount of force necessary to prevail in some future conflict is no easy task. But despite the difficulties inherent in doing this - the price of not doing it, or not doing it correctly, are enormous. Great nations have been overthrown because their enemies were just a little bit stronger.

Maintaining it's sovereignty is the first objective of a state but military defeat is only one of the risks that threaten it. Economic defeat can humble just as surely. Hence the great paradox. While military expenditures offer insurance against military defeat they also tend to handicap economic development. Thus we find that the debate over military expenditures generally revolves around two questions.

- * How strong must we be to deter our enemies?
- * How can we acquire this strength most cheaply?

We will examine the current position of the Canadian government with regard to these issues as outlined in a number of official documents.

8.2 The 1994 White Paper on Defence

In 1994, the Canadian government prepared a White Paper on Defence which was to intended to guide the direction of

defence policy for years to come. The White Paper states that the demise of the Warsaw Pact has dramatically altered the assumptions on which defence policy has rested for two generations. It suggests that the end of the Cold War has exposed a number of intractable problems which pose a new set of security concerns. Overpopulation is putting pressure on the environment as demand for food and energy continue to outpace production. This trend is expected to result in an increasing number of 'failed states' which are incapable of meeting the basic needs of their citizens. This, in turn, is expected to lead to an increasing growth in the number of refugees world wide. These trends, coupled with the resurgence of old hatreds and the proliferation of advanced weaponry, pose serious challenges to the security of developed nations including Canada.

This state of affairs is summed up in the White Paper (1994: 6) as follows:

"Under the best circumstances, predicting international trends is challenging. Given the unsettled nature of global affairs, it is impossible to foresee with any degree of certainty how international affairs will develop in the years to come. In light of the much reduced threat of global war, the world may not be as immediately dangerous today, at least for Canada, yet it is neither more peaceful nor more stable. It would, of course, be wrong to concentrate attention exclusively on extreme cases of disorder in some regions at the expense of real progress elsewhere. Yet, given recent trends, it seems prudent to plan for a world characterised in the long term by instability."

The White Paper (1994: 7) faces the issue of cost squarely saying,

"Defence policy must respond not only to an uncertain and unstable world abroad, but also to challenging circumstances at home. In designing a new defence policy, the Government has sought to remain attentive to the very important domestic influences on Canada's defence posture and, in particular, to current fiscal circumstances."

The White Paper (1994: 7) quickly gets to the heart of the problem,

“The accumulated debt of the federal and provincial governments stands at approximately \$750 billion: the federal governments annual debt servicing payment in 1994-95 alone will amount to \$44 billion - more than the budget deficit of \$39.7 billion and some 27% of the total federal budget.

The White Paper (1994: 7) continues,

“This situation limits governmental freedom of action in responding to the needs of Canadians and constrains the ability of governments at all levels to deliver essential services. To deal with this problem and avert a crisis of confidence in the Canadian economy, the federal government has been cutting its expenditures.... In an environment of fiscal restraint, the Government must continue to constrain all expenditures, including those devoted to defence.”

Canada is unusual among nations in that it has never fought alone. Canada has fought alongside Britain, first as a colony and then as a self-governing Dominion and then as a partner. And although Canada has long since traded her imperial relationship with Britain for the economic embrace of the United States her role as junior partner has remained constant. The Canadian commitment to collective security thus comes naturally. The White Paper details Canada's history of working within the framework of collective security alliances and her dedication to these types of arrangements. Mention is made of Canada's participation in NATO, NORAD and in UN missions such as Cyprus, Rwanda, Somalia, Cambodia, the former Yugoslavia and, of course, the Gulf War.

The White Paper suggests that while Canada's security is enhanced by her participation in these multilateral organisations, there is also a risk inherent in them - that they breed a false sense of security and can act to undermine a nation's determination to maintain an independent military

capability. The White Paper underlines this by devoting a number of paragraphs to arguing why it is in fact necessary for Canada to maintain a military at all. In part (1994: 11) it states,

“Sovereignty is a vital attribute of a nation-state. For Canada, sovereignty means ensuring that, within our area of jurisdiction, Canadian law is respected and enforced. The Government is determined to see that this is so.

Some have argued that the recent dramatic changes abroad have eroded the traditional rationale for the role that the Canadian Forces play in the defence of Canada. It would be a grave mistake, however, to dismantle the capacity to defend our country. Canada should never find itself in a position where, as a consequence of past decisions, the defence of our national territory has become the responsibility of others.”

The document then outlines the non-military areas in which the Canadian Forces can play a useful role including; aid to the civil power; providing peacetime surveillance and control; securing our borders against illegal activities; fisheries protection; environmental surveillance; disaster relief, and search and rescue. It might be said that only in a country with an ingrained tradition of pacifism would it be necessary to list duties such as these to encourage support for maintaining an effective armed force.

The White Paper suggests that the best approach to meeting both internal demands and external threats is to maintain (1994: 10) a “multi-purpose, combat-capable force...” This precludes the acquisition of expensive special purpose equipment. It also precludes the downgrading of the Army to a purely constabulary force. It requires, instead, the preservation of a general purpose combat capability in each of the three services.

The White Paper states that spending cuts will be inevitable given the fiscal regime and it announces the

immediate reduction of the Regular Force to 60,000 personnel and the Reserve Force to 23,000 personnel. It also states that further cuts should be anticipated.

While most of the focus was on how the military would endeavour to do more with less, at least a small section of the White Paper was directed to what would steps would be taken if Canada were threatened. The White Paper (1994: 32) took a small step toward the creation of a mobilisation plan by outlining and defining the stages of mobilisation. It said,

“The new strategic environment has prompted the Government to reconsider the traditional approach to mobilisation planning. Mobilisation plans must provide for a graduated and orderly transition from routine peacetime operations to higher levels of involvement, which ultimately could include the total mobilisation of the nation. Accordingly, mobilisation plans will be revised on the basis of a new four-stage framework.

The first stage of a response to any crisis or emergency would involve ‘force generation’; that is, all measures needed to prepare elements of the Canadian Forces to undertake new operational tasks, and to sustain and support them. These functions will be undertaken within the existing resource framework of the Canadian Forces. They will include the training and preparation of Reservists to augment the Regular Force.

The next stage, ‘force enhancement’, would involve the improvement of the operational capabilities of the existing forces through the allocation of more resources. It would be undertaken without permanent change in the posture or roles of the Canadian Forces, although the formation of temporary units or specialist element could prove necessary. This level of mobilisation is similar to actions taken in response to the 1990 war in the Persian Gulf and all current peacekeeping commitments.

‘Force expansion’, the third stage, would involve the enlargement of the Canadian Forces - and perhaps selected elements of the Department of National Defence - to meet a major crisis or emergency. It will involve permanent changes in the roles, structures, and taskings of the Canadian Forces - and could call for the formation of new units, the enhancement of existing facilities, and the procurement of additional equipment. This stage is similar to the structural and role changes undergone by

all elements of the Canadian Forces and the Department of National Defence in 1950-1952, when Canada provided armed forces to the United Nations' multinational force in Korea, and to the newly formed NATO in Europe.

Finally, while a major global war is highly unlikely at this time, it remains prudent to have ready 'no cost' plans for total 'national mobilisation'. This fourth step could touch upon all aspects of Canadian society and would only come into effect with the proclamation by the Governor-in-Council of a 'war emergency' under the Emergencies Act."

Of course it should be noted that the act of describing the stages of mobilisation does not constitute a mobilisation plan. A mobilisation plan outlines in great detail the specific actions which must be taken by units and formations and the time lines within which these actions must be taken. It also lays out in detail the logistical arrangements which would need to be made to facilitate this. Canada does not have a mobilisation plan.

The White Paper lays out the government's strategy for meeting it's commitments despite substantially reduced resources. Much of this strategy relies on the increased use of the Reserves and the White Paper (1994: 32) states the governments continuing support for the Total Force concept. It says,

"Under the Total Force concept, Regular Forces are maintained to provide the Government with a ready response capability; Reserve forces are intended as augmentation and sustainment for Regular units, and, in some cases, for tasks that are not performed by Regular Forces - such as mine countermeasure operations. The concept also provides the framework for training and equipping the Reserves.

Progress has been made in the implementation of the Total Force concept, with many Reservists now fully ready to undertake Regular Force functions. Indeed, in recent years, several thousand Reservists have served in demanding missions at home and abroad. The Total Force approach is right for Canada..."

The purpose of a White Paper on Defence is to describe

clearly the nature of the perceived threats and to outline how they will be met. This White Paper fails to do that convincingly, but this is due less to the quality of the analysis which has been undertaken than the fact that the situation faced is new and uncertain. Canada is not the only nation that is struggling to come to grips with the challenges posed by the realities of the 1990s.

8.3 The 1995 Federal Budget

The 1995 budget picks up where the White Paper left off, filling in the details regarding base closures, reductions in capital expenditures and cuts in personnel. Reductions in spending totalling \$2.8 billion over four years were announced.

These cuts were not the first nor will they likely be the last. Spending in the fiscal year 1997-98 will be 20% lower in real terms than it had been in 1987-88 and 40% lower than had been forecasted for that year in the 1987 White Paper. And while other countries have cut more, Canada started from a lower level. During the Cold War years, Canada spent an average of 2% of GDP on defence compared with a NATO average of close to 5%. Thus while other countries can reduce expenditures by curtailing capital expenditures or trimming discretionary spending, Canada has little fat to trim. Nevertheless, the budget (1995) reduces Canada's expenditures on defence to below 1.5% of GDP.

8.4 The Special Commission on the Restructuring of the Reserves

The 1994 White Paper promised a comprehensive review of the Reserves. In the Spring of 1995, the Minister of National Defence kept that promise by appointing a Special Commission on the Restructuring of the Reserves. This was not the first examination of the Reserves in recent years, however, the

profiles and qualifications of the commissioners suggested that it might well turn out to be the most important.

The Commission was to be chaired by a Second World War veteran and former Supreme Court Chief Justice, the Right Honourable Brian Dickson. Also serving as commissioners were Lieutenant-General Charles Belzile (Ret.), who commanded the Canadian Army during the mid 1980's when the Total Force policy was first adopted, and Professor Jack Granatstein, Canada's pre-eminent military historian. All three were known to be supporters of the Reserve.

The mandate of the commission (1994:129) was as follows,

"The Commission will examine and make recommendations concerning the role, structure and employment of the Canadian Forces Reserve Force and options for restructuring the Force, notably the Primary and Supplementary Reserve sub-components thereof, to maximise their operational and cost effectiveness and, without restricting the generality of the foregoing, the following matters:

- * The most suitable roles, missions, tasks and structure for each element of the Primary Reserve and the Supplementary Reserve under the new mobilisation concept.
- * The most suitable command and control arrangements to achieve an effective and efficient use of scarce Reserve resources.
- * The level of training required within all components of the Primary Reserve to achieve maximum effectiveness and efficiency.
- * How the elements of the Primary Reserve can contribute more effectively and efficiently to Canada's defence commitments, and support other government departments and agencies.
- * Specialist functions, if any, that could be effectively performed by elements of the Primary Reserve.
- * The options available to the government on the

organisation and control of the Primary and Supplementary Reserves.

- * Ways and means whereby the responsiveness and productivity of the Primary and Supplementary Reserves can be enhanced.
- * Methods to reduce overhead in the Primary reserve structure and program.
- * Changes in regulations, orders, procedures, or administrative approaches to implement the recommended Primary Reserve structure.
- * The Canadian Forces Cadet Program and the Canadian Rangers are not part of the Commission's specific mandate; however, the Commission may comment on these subjects should it consider it appropriate.

The detailed recommendations of the commission will be dealt with later in this thesis but we will deal now with what might possibly be the most important contribution of the commission. This was to describe their vision of the proper role of the Reserves. In this they differ with the current practice of seeing the Reserve primarily as a source of individual augmentees for the Regular Force. Instead they state that "the fundamental role of the Reserve Force is to provide the mobilisation base for war." This approach is in line with the policy of both Britain and the US.

8.5 Aftermath of the Special Commission on the Restructuring of the Reserves

The recommendations of the Special Commission on the Restructuring of the Reserves were submitted to the House of Commons Standing Committee on National Defence. The members of the committee criticised the report, not for its recommendations, but rather for the terms of reference it was given. The Special Commission had been told to assume that the Reserve would be reduced in size from about 28,000 to approximately 23,000. The committee rejected this assumption on the basis that more Reservists would be needed to meet current

commitments. The committee did not make specific recommendations but insisted that better cost figures on the Reserves be collected before any cuts are made. The opposition Reform Party issued a minority report calling for the Reserve to be increased in size to 66,000.

CHAPTER IX

BLUEPRINT FOR CHANGE

9.1 The Objective of this Chapter

This chapter offers a program for the revitalisation of the Canadian Army Reserve within the context of the Total Force concept. The various chapters preceding this one are drawn together in this chapter so that concrete recommendations for change can be made. The following figure represents how various factors impact upon the decision making process.

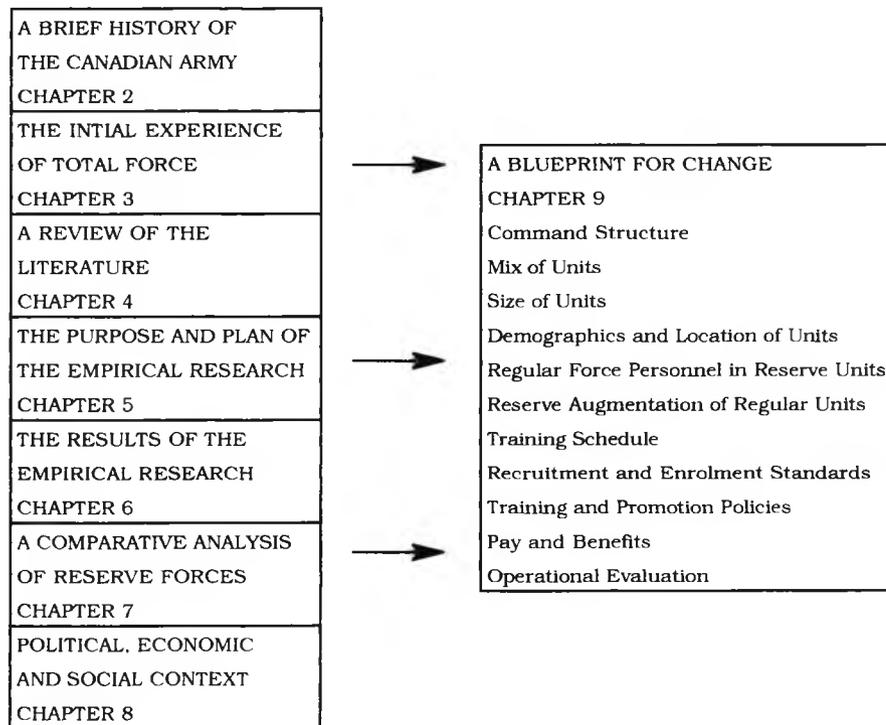


Figure 9-1: Blueprint for Change Decision Model

This chapter contains recommendations for change in each of eleven areas. Brief justification will be offered for each of the suggestions made. This will come from the information provided in chapters 2 through 8.

In all cases, the financial costs of recommendations will be kept firmly in mind. Accounting information which would permit an accurate determination of the costs and savings of these recommendations simply does not exist and so a complete analysis of the financial implications of these suggestions has not been attempted. Instead, simple estimates of the costs and savings of the recommendations proposed are offered, based on the best information available.

In any work of this nature, one must at some point define any limits to the area of interest and the nature of any underlying assumptions. We will do that now. In this work we limit our area of interest to the Army Reserve. The Regular Force will be touched on tangentially but not as a main focus. Our main assumption, is that the current level of funding for the Reserve will remain at more or less the present level in future years. Our recommendations flow from this as follows: some of the recommendations suggest how operational capability could be increased at minimal cost; others suggest how spending cuts could be achieved without impairing readiness. The overall objective is to make recommendations which would, without additional funding being required, render the Army Reserve more ready than it is today.

9.2 Command Structure

The Canadian Army should retain its present regional organisational structure under which all Regular and Reserve units report through District and Area Headquarters as they do at present. However, a number of changes should be made to give the Reserve, and the Army as a whole, greater operational capability.

Most Districts, as they are presently constituted, contain approximately a Brigade worth of units. Districts should be reconstituted as Brigades in order to take advantage of this fact.

These District - Brigades should be commanded by a Reserve Brigadier-General who would have a Regular Colonel as his deputy. District HQs would double as Brigade Headquarters and the units of a District would come together as a Brigade on an annual or semi-annual basis.

Only Reserve units would come under these District - Brigades. Regular units would be grouped together under the umbrella of one of three Regular Brigades.

Recognition of Districts as Brigades would lead naturally to the recognition of Areas as Divisions. Land Force Western Area would include four Reserve Brigades and one Regular Brigade. Land Force Central Area would include five Reserve Brigades and one Regular Brigade. Land Force Eastern Area would include three Reserve Brigades and one Regular Brigade. Land Force Atlantic Area would include three Reserve Brigades. Command of Land Force areas would go, as it does now, to a Regular Major-General. Some consolidation of the number of these District - Brigades may be in order and will be dealt with later in this chapter.

The Auditor General (1992: 452) criticised the inability of the Reserve to conduct field operations at above the sub-unit level. These changes, while minor in scope, would facilitate the exercise of the Reserve at higher levels on a more regular basis. The District - Brigade HQ would remain together throughout the year and would command the same units on exercise that they command in garrison. This should have positive effects on operational readiness and on the capability of the Army as a whole to mobilise. These changes could also be expected to have an important effect on the morale of soldiers, who would be better able to see how what they do fits into the big picture.

Canada's Army has not been organised into Divisions and the Reserve has not been organised into Brigades since shortly

after World War II. As a result, talk of a four Division Army will likely strike some as extravagant. It is not. Prior to World War II the Canadian Army, both Regular and Reserve, was organised in a 7 Division structure. And that was at a time when Canada's population was just over one third what it is today. This system is similar to what is done in Britain and the US today.

Costs associated with these changes would be negligible. The personnel which would be required to make this a reality are already employed in the various District Headquarters.

The importance of unity of command and a clear mission have long been understood in the military. It is time that these concepts were applied in the Canadian Army Reserve.

9.3 Mix of Units

If the Total Force concept is to be fully implemented it must be recognised that some tasks are more suitable to Regular soldiers and others are more suitable to Reserve soldiers. This may be due to the level of proficiency required or it may simply be due to economic considerations.

A Total Force Army should be constructed so it is possible to deploy the maximum number of complete formations, balanced according to the task, in the minimum amount of time. The structure of this force should take into consideration the costs of training soldiers in the various branches, the relative rates of attrition in the two components and the respective ability and willingness of Reserve and Regular soldiers.

The infantry is the arm which best lends itself to the reality of the Reserve Force. Infantry training requires little in the way of equipment and as a result is quite inexpensive in

relation to the other arms. Furthermore, the complexity of the task is probably lower than in some of the other arms. When compared to the other arms, willingness is probably more important in the infantry and ability less so. The role of the infantry in the Reserve is acceptable at present.

The artillery is also reasonably well suited to the Reserve. The 105 mm howitzer is an excellent gun for training purposes. It requires little maintenance and ammunition is relatively inexpensive. Troops trained on it can be quickly converted to the 155 mm howitzer. Willingness and ability are both important in the artillery but in measures that are easily attainable in the Reserve. The role of the artillery in the Reserve is acceptable at present.

The place of the armour within the Reserve needs to be reconsidered. When tanks cost \$4 million dollars per copy, are equipped with the latest in high tech equipment, and are easily the most potent weapon on the battlefield, the quality of their crews becomes a vital question. The cost of accidents alone make it imperative that crews have the highest possible ability. These factors suggest that tanks should be manned by Regular soldiers. This implies no criticism of Reserve armour soldiers, but simply recognises a reality which has been reflected in fact for over a generation. Reserve units are not equipped with tanks and will not be in the foreseeable future.

A proper role for Reserve armour units needs to be defined and they need to be equipped accordingly. A number of options exist in this regard. Some Reserve 'tank' units could be reclassified as armour reconnaissance and equipped with the vehicles (Cougars) used by units of that speciality. This would allow them to develop many of the same skills as tankers but to specialise in a role for which their equipment is somewhat suited. Some Reserve 'tank' units could be reclassified as wheeled reconnaissance and equipped with the vehicles (Iltis) used by

units of that speciality. Some Reserve 'tank' units could be converted to an anti-armour role or some similar task which would take advantage of their existing skills. One thing is clear. It makes little sense to train large numbers of Reservists to be tankers when their units have not been equipped with tanks for over 20 years and possibly never will be.

The combination of ability and willingness necessary in the engineers can be obtained in the Reserve at reasonable cost and therefore the role of the engineers in the Reserve is probably acceptable.

The levels of ability and willingness required of soldiers in Service Battalions can easily be achieved by Reserve soldiers. However, there are more Service Battalions in existence at present than are required. At present 5 Districts have two Service Battalions, three Districts have one Service Battalion plus an independent Service company, six Districts have one Service Battalion and, interestingly, one District has no service Battalion at all. These 'extra' units have resulted primarily from the amalgamation of Districts over the past 40 years. Whatever the historical explanation for the existence of these units, there is no reason for any District to have more than one Service Battalion. Units in excess of this requirement should be closed. Existing personnel in these units should be incorporated into other local units.

Service Battalions may also be the source of other savings. It is recognised that with the exception of some specialised trades, the levels of ability and willingness which are required in Service Battalions can easily be attained in the Reserve. As a result, there may be opportunities to reduce costs by relying on Reserve personnel to perform some tasks presently performed by Regular soldiers. One possibility would be that the Service Battalion of each of the Regular Brigades would operate at perhaps 40% strength throughout the year. It would

then be reinforced by personnel from Reserve Service Battalions prior to and during any Brigade level exercise conducted by the Regular Brigade. This would reduce Regular Force overhead while providing Reservists with useful on the job training.

Injured personnel have a right to expect top quality medical attention. Medics require both moderately high levels of ability and high levels of willingness. These can be achieved within the scope of Reserve training. Like Service Battalions, however, the location of Reserve Medical companies does not follow any obvious geographical or operational rationale. Two Districts have two Medical companies, three Districts have one Medical company plus an independent medical platoon or detachment, six Districts have one medical company and four Districts have no medical unit at all. There is no requirement for any District to maintain more than one Medical company. Units in excess of this requirement should be closed. Medical companies at present are commanded by Lieutenant-Colonels. This is an obvious example of over ranking even by Reserve standards. Medical companies should be commanded by Majors and should be attached to a Service Battalion for administration.

Medical companies may also offer a source of savings similar to that suggested for the Service Battalions above. Reserve Medical companies could be tasked to provide medical personnel in support of Regular Force exercises thus reducing the need for Regular Force medics.

Much of the current structure of the Reserve is based not upon rational analysis but rather upon tradition. Nowhere is this more apparent than in the case of the Militia bands. In April 1994, the Canadian Reserve consisted of 110 major units, 26 minor units and no less than 50 bands. There are more bands in the Reserve than artillery and armour units combined. Once considered essential to a units morale, bands used to play

an important public relations role by performing at picnics, parades and other public events. But that was a long time ago and in a 400 channel universe military bands have lost much of their raison d'être. Most Reserve bands are not even really 'military bands' in any proper sense of the term but are in fact just civilian bands dressed at public expense. Members of these bands are paid by the taxpayer to attend practice. But when they play in public they are usually paid at union rate, part of which is paid by the taxpayer, and part of which is paid by the organiser of the event through the sale of tickets. Most military bands will play any event willing to pay for the privilege of listening to them. They have been known to play weddings, bar mitzvahs and high school reunions, all at public expense. In an age of severe cutbacks there is no justification for this type of expenditure. There should be no more than one band per District; the remainder should be closed.

The Canadian Land Forces would resemble the following after the above mentioned changes:

		REGULAR	RESERVE	RATIO
ARMOUR	Tank - Leopard	3 Regiments		3:0
	Armoured Recon		5 Regiments	0:5
	Wheeled Recon		9 Regiments	0:9
	Anti-Tank		3 Regiments	0:3
ARTILLERY	Field and Light	3 Regiments	17 Regiments	1:5.6
	Air Defence	1 Battery	2 Regiments	1:6
INFANTRY		6 Battalions	53 Battalions	1:8.8
ENGINEERS		3 Regiments	18 Squadrons	1:2
SERVICE		3 Battalions (-)	15 Battalions	1:5
MEDICAL		3 Field Amb	12 Companies	1:4

Table 9-1: Proposed Canadian Regular and Reserve Force

The net effect of these changes on the Reserve would be as follows: the closure of 5 Service Battalions, 3 Service companies, 2 Medical companies, 3 Medical platoons and 35 bands. The net effect of these changes on the Regular Force would be as follows: the reduction of 60 percent of the personnel in three Regular Force Service Battalions. These changes are estimated to result in the elimination of

approximately 2400 Reserve positions and 1200 Regular positions which could be put to better use elsewhere. It should also be noted that these changes would enable the closure or reallocation of a number of armouries.

Taking these changes into account, it would probably be sensible to recognise the difference between the three Regular and fifteen Reserve Brigades discussed in the previous chapter. The Regular Brigades would be constructed as Canadian Mechanised Brigade Groups according to Canadian doctrine. The Reserve Brigades could more accurately be classed as Light Infantry Brigades. This outcome would be similar to what the British and American have chosen to do with their Reserve Forces.

It should be noted that some changes to the Total Force Infantry Battalions are reflected the chart above. The rationale for these changes are provided in sections 9.6 and 9.7.

9.4 The Size of Units

Any successful effort to reform the Canadian Reserve will have to entail a massive reorganisation of existing units with a view to creating Battalions and Regiments which are worthy of the name. All units should have at least two and preferably three fully operational sub-units. Minor units should be attached to major units as outlying sub-units. For simplicity we will assume that all major units will be expanded by one sub-unit. This would require an increase of approximately 70 percent of the strength of most units. The exact number of additional positions to be allocated to units would be based upon the need for additional soldiers in each arm, the ability of the various units to fill these new positions, and the availability of equipment.

These recommendations would recreate a more normal

military hierarchy within units and would create a healthy spirit of competition and rivalry between sub-units. This would create an opportunity for meaningful training at higher levels (Battalion and Brigade level) than is possible at present. This would have positive effects on the ability of individual officers and NCOs by increasing the realism of training. This would also have positive effects on group morale as training would be more challenging and soldiers would have a better understanding of the value of their contribution. Finally, these recommendations would create a Total Force which would have the operational capability to deploy a larger number of fully formed units with less lead time.

These recommendations would require the funding of approximately 10,000 additional positions in the Reserve. The cost of these would be offset by the reduction of 2400 Reserve and 1200 Regular positions as suggested in the previous section. No additional expenses would be required for infrastructure as most units already inhabit buildings which are sufficient for what is being contemplated.

These recommendations would bring the Canadian Army Reserve more into line with the practice in Britain and the US. These recommendation would reverse a 50 year decline in the size and stature of the Army Reserve in Canada. They would bring the Reserve back to approximately one half the size that they were in 1956 when the first major round of cutbacks were felt.

9.5 Demographics and Location of Units

It is imperative that Reserve units have access to an adequate recruiting base and it is important that Reserve units develop strong relationships with the communities they serve. For this reason, it is essential that Reserve units be located where the people live.

A rationalisation of the location of Reserve units is required. This should be done in conjunction with the above stated need to close some Service Battalions and Medical companies and for most other units to establish additional sub-units. In some cases this would mean that existing units would establish sub-units in the suburbs. In cases where there are presently more units located in a downtown area than the population can support, the weakest of these units should be relocated entirely to an area of high population growth which is currently unserved by an existing Reserve unit.

These recommendation follow principles which are understood and followed by the British and Americans and which were understood and followed in the Canadian Army through most of it's history. Unfortunately, they have been ignored in the recent past.

As many of the armouries located in downtown cores are situated on valuable pieces of real estate and costs tend to be lower in the suburbs, it is likely that this process would be self financing.

9.6 Regular Force Personnel in Reserve Units

The Regular Force cadre in a Reserve unit should number between six and twelve. Bearing in mind that under these proposals most Reserve units would be larger than they are at present, this does not actually represent an increase in percentage terms. It would, however, have substantial positive effects on the contribution that these Regular cadres could make. In percentage terms these numbers are in line with the practice in both the Territorial Army and in the National Guard.

The proper role of Regular soldiers in a Reserve unit is to undertake some of the tasks associated with administration, maintenance and training so that Reservists can concentrate on

undergoing training relevant to their arm. The use of Regular soldiers should be limited to jobs which require levels of ability greater than are typically available in the Reserve or which require commitments of time which can not be made by available Reservists. This means that some staff positions in a Reserve unit such as Adjutant, Quarter Master, and Operations Officer would usually be held by Regular officers or alternatively by Reserve officers working on a full time basis. The Regular cadre should consist almost entirely of Sergeants and above while routine maintenance should be undertaken by Reservists working on a casual basis.

A training cell, staffed by Regular soldiers, should be established to organise and conduct interesting and meaningful training during parade nights and weekends. This training cell should also be used to conduct courses during the year. These can be conducted during the week, if Reserve personnel are available, or during weekends. Each sub-unit should be allocated at least one Regular senior NCO to complete routine administration. The one overriding principle is that all line positions should go to Reservists except in the unusual circumstance that there are simply no qualified Reservists available.

The principle of setting line positions aside for Reservists would be abandoned upon mobilisation. In that case, commanders would have the option of placing Regular personnel into line positions where appropriate. This would allow units to achieve the type of one time increases in operational effectiveness described in chapter 3.

Reserve Commanding Officers should be given a budget for their Regular cadre, much as they are given a budget for their Reserve soldiers. A CO would then have some discretion as to how he chooses to spend his budget. One unit might have a particular need for Captains while another might have a

requirement for Warrant Officers. In effect this system would allow a CO to contract for Regular soldiers with the skills and qualifications he needs. There is no point in sending Regular soldiers to a unit which does not need them.

It is imperative that quality Regular officers and NCOs be sent to Reserve units. The perception that postings with the Reserve are a dead end mitigate against this, as the best Regulars will resist these postings as a result. Every effort must be made to ensure that the Personnel Evaluation Reports of Regular members attached to Reserve units are fair in comparison to what they would have received in a Regular unit. A tour with a Reserve unit should also be required for promotion at some rank levels in the Regular Force.

This proposal would have positive effects on readiness. Concentrating the use of Regular soldiers in those areas which require higher levels of ability than are typically found among Reservists would have a positive effect on collective ability. Creating better training opportunities would have a positive effect on individual ability. Taking some of the workload off of the backs of Reservists and allowing them to spend more time training would have positive effects on both individual and collective willingness.

This approach to the use of the Regular Force is not revolutionary. It borrows the best from both the British Territorial Army and the US National Guard. In many ways, it also represents the return to a system which worked very well in the past. With the end of the Cold War, strategic realities have changed. Canada no longer requires an army which is ready to fight without notice. With no obvious enemy on the horizon, the most productive use of the Regular Force is again - to train the Reserve.

9.7 Reserve Augmentation of Regular Force Units

The practice of using the Reserve Force almost exclusively as a source of individual augmentees for the Regular Force is a purely Canadian innovation and not a particularly good one. It masks operational deficiencies in the Regular Force which should be addressed. It denudes Reserve units of their best people. And it robs Reserve units of the opportunity to perform what should be their operational role, that of contributing fully formed units and sub-units for operational use particularly upon mobilisation.

Certain recommendations can be made in this regard. Reserve support of Regular operations should, whenever possible, be provided in the form of fully formed units, sub-units or sub-sub units. Although this suggestion will likely startle Canadian defence planners, it should not. This was the intended purpose of Reserve units until the 1950's and is the intended purpose of British Territorial Army units and US National Guard units today. By using large numbers of Reservists in the former Yugoslavia the Regular Army implicitly admits that individual Reservists already have an acceptable level of individual readiness. And, as a result of the suggestions made in this and other sections, the individual readiness of Reservists and the collective readiness of Reserve units would be increased even further.

For those tied to the idea that only Regulars can achieve high levels of readiness, it should be kept in mind that larger numbers of Regulars would be posted to Reserve units under these proposals and that upon mobilisation they would be placed into line positions where appropriate. This would combine the benefit of creating sub-units of personnel who are already known to each other with the opportunity for an immediate increase in operational readiness resulting from the introduction of Regular soldiers.

Some consideration needs to be given as to whether some types of operational tasks could be undertaken entirely by activated Reserve units. Peacekeeping missions to Bosnia in 1995 probably call for units which are composed primarily of Regular soldiers. Peacekeeping missions to Cyprus, however, could have likely been undertaken by Reserve units augmented by a Regular cadre as contemplated above. The UN Mission to Rwanda, and UN missions in the Middle East and Korea are other examples of missions which could likely be performed by Reservists.

Much attention has been paid to the cost of suggestions in other sections of this chapter. It is only right then to point out the overwhelming savings potential inherent in the suggestions in this section. With no enemy on the horizon, it is impossible to predict when Canada will next be involved in a major war, either as a protagonist or peacekeeper. A large, well trained Reserve is the most cost effective alternative over the long run.

9.8 Training Schedule

Both British and American Reserve Forces train for two weeks each summer. The Canadian Reserve should abandon its Spring exercise in favour of a two-week Summer concentration. A week long exercise is long enough to allow for units to proceed from section level to platoon level to company level training. A two-week exercise would allow enough time to undertake serious training at the Battalion and Brigade level as well. This would allow the Reserve to gain experience working at higher operational levels as was suggested by the Auditor General's (1992) Report. This would have positive effects on both individual and collective readiness. Of course, units would still be able to go on weekend exercises as they do at present.

During the year District - Brigades should adopt the 'new'

training system described in the preceding chapter. Under this system, some training nights are attended only by officers and NCOs and are dedicated to administration and instructor preparation. This would allow officers and NCOs to ensure that the training planned for the other parades is of a consistently high standard. This would minimise the likelihood that the soldiers would end up just wasting their time when they do parade.

Units should organise their training schedule so that sub-units which are not located in the same armoury do not parade on the same night. This would allow Regulars (or Reservists) to prepare high quality training which they could then deliver on more than one occasion. This would cut down on instructor preparation time and conserve resources. Units should attempt to create redundancy in their training so that a soldier who is unable to participate in a certain period of training can undergo it later.

The suggestions made here are based primarily on current practice in the British Territorial Army. They should not entail any increase in expenditures.

9.9 Recruitment and Enrolment Standards

The success of Total Force depends on ensuring a steady stream of able and willing recruits. The CFRCs should continue to apply the same minimum standards to Reserve applicants that they do to Regular applicants, however, steps must be taken to streamline the process so that it can be completed in a reasonable period of time. An average completion time of six weeks would not be an unreasonable target. The facilitation of these changes may require the delegation of recruiters to work directly with individual Reserve units as is done in Britain and the US. The changes contemplated in this section should not entail any increase in expenditures.

9.10 Training and Promotion Policies

Only in the last few years has any attempt been made to rationalise Regular and Reserve training standards so that roughly the same training is offered to soldiers in each of the two components. Despite the progress which has been made in this regard, a number of additional steps recommend themselves.

More training should be made available through home study, both for Regular and for Reserve soldiers. Much of what students currently learn on formal courses could be packaged into home study modules which could be completed by students on their own time. Tests could be administered and credit granted for the learning achieved. Formal courses could then reinforce knowledge already acquired before moving on to more advanced training. To ensure a degree of equity, both Reserve and Regular soldiers should be compensated for the learning accomplished in this manner based on the number of days of formal instruction which was eliminated as a result. A program of this nature would make it much more possible for the Reservist to achieve the same standard of training as his Regular counterpart without sacrificing additional time away from work.

The American example of offering exactly the same courses to Reservists and Regulars should be emulated. Wherever possible, courses should be identical for both components. Longer courses should be broken down into a series of home study packages, exams and two-week formal course modules. Until this is accomplished, places on Regular courses should be made available to Reservists. This has been done sporadically in recent years and should be continued.

Members of the Reserve who have paraded regularly during the previous year, who are full time students, and who are

willing to commit themselves in advance, should be guaranteed full time employment during the summer. It should be recognised that students can undertake courses and taskings for several months each summer whereas these same individuals will have difficulty getting even two weeks off only a few years later. The objective should be to train young soldiers two ranks up while they are students so that they will not require further training for some years after completing their studies. Policies such as this would certainly have a positive effect on the ability of units to attract and retain quality personnel. A program of this nature is currently in place in the US National Guard and is not so very dissimilar to the various officer training programs which existed in Canada until the 1960s.

Some of the changes contemplated in this section would entail increased expenditures in the short run. However, in the long run, expenditures would likely be reduced. After the start up costs were incurred, the home study modules would certainly be cheaper than the formal courses that are run now. Furthermore, many of these changes would likely have a positive effect on attrition rates. Higher rates of retention would reduce the costs of training.

If rates of retention were to rise sufficiently, it might even be possible to increase the time in rank requirements for promotion in the Reserve. This would reduce the difference in the experience level of Regular and Reserve soldiers and would have a positive effect on the individual and collective readiness of Reservists.

9.11 Pay and Benefits

Many Reservists have come to the conclusion that they will receive no long term benefit as a result of their service in the Reserve. Reserve attitudes toward the equity of their pay and pension benefits was described in chapter 6. A pay scale

which does not discriminate against Reservists would be an important first step towards changing this situation.

The government should consider the adoption of a system of pay and benefits which would incorporate the best aspects of both the British and American systems. A system which would have the optimal effect on retention and motivation might resemble the following: Reserve daily rates of pay would be approximately 70% of Regular Force rates; a bonus equal to a further 10% would be paid if the soldier demonstrated satisfactory performance throughout the year, completed certain fixed training objectives, attended the annual two week exercise and was recommended by his CO.

A Reserve pension plan, which would be operated along the lines of a voluntary Retirement Savings Plan, would be organised for reservists. (RSPs are government approved savings vehicles which allow for a deferral of taxes until retirement) Under this system, all Reservists would be able to contribute a portion of their Reserve wages to their RSP. The government would match these contributions, up to the amount of the bonus that the soldier earned in that year. This matching would be doubled if the individual also earned the bonus in the following year. Unlike most RSPs these funds would be completely locked in and could not be touched prior to retirement.

Under this system, the total potential salary of a Reservist would be equal to that of his Regular Force counterpart. However 30% of this would be contingent on performance over two consecutive years. This would provide equitable treatment to the Reserve but would also provide the kind of continuing performance incentive which the Reserve lacks at present.

This pension plan should allow for portability between the Reserve and the Regular Force. This would allow for the type of

flexible options for transfer between part time and full time status which exists in the US Army.

These measures, would have an important effect on the operational readiness of the Reserve as they would alter the power relationship between Reserve officers, NCOs and soldiers. A system which makes 30 percent of a Reservist's annual pay contingent on performance and dependent upon the recommendation of his superiors would give considerable power back to the officers and NCOs of a unit.

By increasing the financial rewards to Reserve service as outlined above, the number of applicants to the Reserve would increase, the number of soldiers who stay in the Reserve would increase, the quality of the soldiers who stay in the Reserve would improve and the power of Reserve officers and NCOs would increase. These changes would have powerful positive effects on the individual readiness of Reserve soldiers and on the collective readiness of Reserve units.

Objections will be made to this suggestion based on cost. However, the greater cost certainly lies in paying soldiers poorly. Even a basic training course costs in excess of \$10,000 per candidate. It is foolish to expend tens and hundreds of thousands of dollars to attract, recruit and train Reserve soldiers only to have them quit for want of a few thousands of dollars pay per year. It is likely that these proposals would actually result in lower overall expenditures once the effect on attrition is taken into account.

The forgoing does not suggest that most Reservists are not strongly motivated by a desire to serve. However, no military in peacetime should expect that soldiers serve their country at the expense of the financial security of their families. And that is the situation that exists today.

9.12 Operational Evaluation

It is a military axiom that soldiers do what you inspect not what you expect. It is therefore important that commanders focus the attention of units on what is important and not just on what is easily measured.

A system of evaluations needs to be created which measures those activities of a Reserve unit which are truly relevant to creating operational capability. A three part system such as the following should be considered.

First, basic soldier skills should be evaluated on an individual basis. This could be done on a large scale as part of a formal exercise or it could be done during training periods within units. Either way, clear standards should be set and monitored by higher headquarters. Results should be collected for all soldiers and should impact on the individual soldier's eligibility for further courses, for promotion and for the bonus mentioned above. This would ensure that all members maintain their basic skills at an appropriate level. This first evaluation is concerned with individual readiness. It would test individual ability directly and the turnout of soldiers for these evaluations would give a good indication of individual willingness.

Second, units should be evaluated collectively once per year and provided with a formal written assessment of their strengths and weaknesses. This could be modelled on the Reserve artillery competition which takes place presently. This evaluation is concerned primarily with the collective readiness of the unit. A single national marking team should be constructed which marks all units of a given arm across the country. This would increase the uniformity and quality of the service that they provide.

Finally, at the end of each training year, units should be

required to fill in a report such as that used for the British Operational Evaluation. This report would record unit achievement in areas such as the following: the number of soldiers who undertook certain types of training; the percentage of soldiers who are fully trained; the percentage of soldiers who attended courses; the percentage of soldiers who attended the two-week summer exercise; recruiting figures; or any thing else which is felt to significantly affect the building of a successful Reserve unit. This evaluation would focus attention on those areas of a Reserve units activities which lead directly to individual and collective readiness.

These three distinct assessments would both give District and Area Commanders useful feedback with regard to unit effectiveness and collectively they would focus the attention of the unit on areas of operational importance. These changes would not entail any increase in expenditures.

9.13 Issues Relating to Implementation

The recommendations made in the first part of this chapter (sections 9.2 - 9.6), are related to the overall organisation and structure of the Reserve and will best be undertaken as part of a single reorganisation. This is partly because the recommendation relating to the recognition of the various Districts as Brigades would not achieve an immediate balance between the various arms in the District - Brigades across the country. Some of these District - Brigades would have as few as two infantry Battalions while others would have as many as five. Most District - Brigades would have one artillery unit but two would have two and one would have none at all. An even greater imbalance would exist in terms of armour. Seven District - Brigades would have one armour Regiment, while two would have two and one would have three. Meanwhile five District - Brigades would have no Armour unit at all. In a typical Brigade, structured according to Canadian

doctrine, one would normally expect to find one armoured unit, one artillery unit and four infantry units.

It is likely that the boundaries of these District - Brigades would need to be redrawn in conjunction with a rationalisation of the number and type of units in each area. Some of the District - Brigades are likely too small and would need to be amalgamated. Similarly, if units are to be increased in size, those which have demonstrated an inability to recruit successfully in recent years may need to be closed outright or amalgamated with other units. And of course, the closure, amalgamation or rebadging of units may also be necessary in order to create the desired balance between the various arms in each District - Brigade. Some units should be given the opportunity to relocate to the suburban areas which hold such promising recruiting potential. This process would need to be carried out with the intention of creating healthy units with several sub-units which could parade at or near their full-strength.

The recommendations made in the second part of this chapter (sections 9.7 - 9.12), relate to changes which do not require any alterations to the overall organisation or structure of the Reserve. These changes could be implemented quickly either on an individual basis or in conjunction with the others.

Issues related to the management of change are not touched on in this document. The importance of building broadbased support for change is recognised, as is the value of involving personnel at all levels in the decision making process. It is believed, however, that there is already a strong felt need for change in the subject organisation and that most of the changes recommended would receive immediate widespread support.

9.14 A Brief Consideration of Costs

Deterred by a dearth of useful information, we have avoided a detailed examination of the costs or savings involved in each of these various recommendations. However, some discussion of these issues is unavoidable and necessary.

According to the Government of Canada's financial accounts, during fiscal year 1991 - 1992, the government spent \$2,103,000,000 to support 14,087 Regular (army) soldiers and \$479,000,000 to support 22,455 Reserve (navy, army, air) personnel. This computes to approximately \$150,214 per Regular soldier and \$21,772 per Reservist.

These figures conceal as much as they reveal. Quick calculations show that Reserve salaries account for approximately \$95,000,000 or approximately \$4200 per soldier. The remainder of the expenses attributed to the Reserves relate to various other operating, support, assigned and capital expenses.

These figures underline the rationale for many of the recommendations made in this chapter. They suggest that Reservists are cheap relative to their Regular Force counterparts at least in terms of direct costs. And they reinforce the point that personnel costs in the Reserves are small in comparison to the costs of infrastructure.

This limited data supports the basic assumptions underlying many of the recommendations contained herein: that the overhead costs of the Reserves are too high while too little is being spent to train too few Reserve soldiers; that small amounts of additional spending could increase Reserve pay and benefits dramatically and would likely have important results on retention; and that the Reserve offers, at least potentially, good value for money.

9.15 The Recommendations of the Special Commission on the Restructuring of the Reserves

As outlined in the previous chapter, the Minister of National Defence appointed a Special Commission on the Restructuring of the Reserves during the Spring of 1995. This commission submitted its final report during November 1995. The terms of reference of this commission included all three services, however, their recommendations dealt with the Army Reserve at length.

There is broad agreement between the recommendations of the commission and those contained in this thesis. Obviously, there are differences in detail and focus. However, except for the acceptance by the commission of an overall reduction in the size of the Army Reserve, in no case are any of the recommendations of the commission at odds with the recommendations contained herein. In many cases the recommendations are very similar. The consolidated recommendations of the commission are contained in Appendix 3.

CHAPTER X

SUMMARY AND CONCLUSIONS

10.1 Summary

The objective of this research has been to explore how the Canadian Army can best use the Regular and Reserve Forces to construct an operationally ready Total Force. We have followed four broad avenues of inquiry.

First, we examined the Canadian experience in an attempt to place our current defence needs into a proper historical context. We discovered that the shift to a heavy reliance on Regular Forces, which occurred at the beginning of the Cold War, was a dramatic departure from the previous practice. Prior to that time Reservists had been the dominant partner in the Canadian Army and the role of the Regular Force had been to support them.

Second, we examined the experience of the Reserve units which had thus far implemented the Total Force concept. We learned that some approaches seem to have produced better results than others. In particular, the practice of placing Regular personnel into staff positions while holding line positions for Reservists seems to be a key to producing positive results.

Third, empirical research was conducted in an attempt to quantify the similarities and differences of Regular and Reserve soldiers in terms of the individual, group and task needs and individual and collective readiness.

The results of the empirical research suggested that Regular soldiers derive more satisfaction across a broad spectrum of items than do Reservists. There is evidence that

the difference is particularly marked with regard to items such as recognition for a job well done, pension benefits and job security. Regulars and Reservists both expressed dissatisfaction with regard to pay.

The results of the empirical research suggested that Total Force units perform approximately the same as Reserve units with regard to a number of group factors. The addition of Regular soldiers into Reserve units seems to have no effect in these areas, at least not within the time frames of the study.

The results of the empirical research suggested that Regular and Total Force units may perform better in terms of accomplishing their tasks than do Reserve units. However, Reserve units appear to have higher rates of participation than Total Force units.

The results of the empirical research suggested that Regular soldiers may have slightly higher levels of individual ability than Reserve soldiers but that the differences are not large. The results suggested that Regular and Reserve soldiers have similar levels of individual willingness. The results suggested that Total Force units may have slightly higher levels of collective ability than Reserve units but that the difference is not large. The results suggested that Total Force and Reserve units have similar levels of collective willingness.

Fourth, we outlined the experience of other allied Armies in areas which appear to affect the results achieved in a Total Force environment. These were as follows: command structure; mix of units; size of units; demographics and the location of units; Regular Force personnel in Reserve units; Reserve augmentation of Regular units; training schedules; recruitment and enrolment standards; training and promotion policies; pay and benefits; and operational evaluations.

Finally, we attempted to draw these various strands together to form an idea of what an operationally ready Total Force would look like. In summary we envision the following.

All units, both Regular and Reserve, would report through a single chain of command, which would be organised on the basis of both administrative and operational requirements. All units, Regular and Reserve alike, would be at or near full strength with close to the proper number of sub-units and would be combined into Brigades and Divisions. Reserve units would be located where the people live. The Regular and Reserve Forces would each specialise in those tasks for which they are better equipped by virtue of their respective levels of ability and willingness.

Regular soldiers would be posted into Reserve units to assist with administration and training. They would be placed into staff positions which require high levels of ability but they would not take line positions unless there were no trained Reservists available. Reserve units would be large and vigorous enough that they could provide fully formed sub-units for deployment on operational taskings. On those occasions the Regular Force members attached to those units would be given operational line positions, where appropriate, to ensure additional depth of experience and expertise.

The training schedule of Reserve units would reflect the reality of the Reserve. Reserve officers and NCOs can not recruit, train, administer, discipline and lead their organisations in the few hours per week that are available. Regular soldiers or full time Reservists would be made available in sufficient numbers to organise high quality training.

Minimum recruiting standards in the Regular and Reserve Forces would be the same but efforts would be made to ensure that applicant files are processed in a timely manner. Course

requirements and promotion policies would be as similar between the two components as possible, allowing for the fact that Reservists must undertake their training during their vacations. Maximum use of home study material would be made in both components.

Pay and benefits in the two components would be equitable. The basic principle that Reserve soldiers are motivated by financial considerations, just as Regular soldiers are, would be recognised. The opportunity to earn pensions would be available to Reservists and these would be organised in such a way as to allow personnel to switch between the two components without penalty.

Operational evaluations would be conducted so that the attention and focus of commanders at all levels would be directed toward the real objectives of an Armed Force in peacetime - training.

In the final analysis, what is envisioned is a true Total Force.

10.2 The Contribution

This work makes a contribution in four different areas. A description of each of these is offered below.

The first contribution is in terms of an historical analysis which focuses on the changing relationship between the Regular and Reserve Forces in Canada. This has not been done before and it challenges the prevailing conceptions regarding the normal relationship between Regular and Reserve soldiers. This is meant to encourage the consideration of a wider variety of alternatives with regard to the composition and organisation of the Total Force Army.

The second contribution is in terms of an analysis of the recent attempts to implement the Total Force concept. This offers new information with regard to the results of these initiatives and, more importantly, some hypotheses as to the reasons for these results.

The third contribution stems from the synthesis of the ideas of Adair, Hersey and Blanchard and Dupuy and the creation of The Integrated Framework of Military Readiness, Unit Attributes and Battle Outcomes. This led to the identification or creation of methods to test the extent to which the Canadian Army is meeting the task, individual and group needs of its members and consequently, how well it is succeeding at creating individual and collective readiness in the Total Force team.

The fourth contribution is in terms of a comparative analysis of Reserve Forces in Britain, the United States and Canada. This offers new information and should serve to support a healthy cross pollination of ideas between the Reserve Forces in each of these countries.

10.3 The Limitations of the Research

There are five major limitations of the research presented in this work. An account of each of these is offered below.

The first limitation of this research relates to the size and composition of the sample population which was studied. There were far fewer Regular soldiers in the sample population than Reservists and these tended to be concentrated in certain rank levels. The validity of the results could be increased through repeating this research with a sample population which is more equally balanced between Regular and Reserve soldiers.

The second limitation of this research relates to the apparent existence of rater effects. The decision to ask supervisors to rate the personnel reporting to them was justified based on practical considerations. However, it resulted in Reserve soldiers being rated by both Regular and Reserve raters and Regular soldiers being rated by both Regular and Reserve raters. As it turned out, Reservists were more likely to be rated by Reservists than Regulars and Regulars were more likely to be rated by Regulars than Reservists. As stated, although they were not statistically significant, rater effects did appear to exist. The validity of the results could be increased by repeating this research with a more impartial rating system.

The third limitation of this research relates to the fact that it was conducted during only one time period. This was unavoidable due to the one time nature of the BC District Soldier Skills Evaluation. However, it is likely that many of the results would have been more interesting if the research had been conducted over an extended time period. This would have provided a greater depth of information with regard to the effect of the implementation of the Total Force concept on a unit over time. The validity of the results could be increased by repeating this research in Reserve and Total Force units over an extended period of time.

The fourth limitation of this research relates to the limited geographical coverage achieved by conducting these surveys only at the BC District Soldier Skills Evaluation. The validity of the results could be increased by repeating these experiments on a national scale.

The fifth limitation of this research was due to time, money and travel constraints as they affected the gathering of information through interviews with Canadian, British and American personnel. Lack of resources constrained the number of interviews which were conducted within Canada and further

constrained the number which could be conducted in person. Lack of resources constrained the comparative analysis to only British and American Forces and it limited the number and types of organisations that could be visited and the number of visits that could be undertaken.

10.4 Directions for Future Research

A number of potential directions for further research recommend themselves. Each of these is described below.

Further investigation is warranted into various aspects of foreign Reserve Forces. This could include a more in depth analysis of British and American Forces. It could also include an investigation of the Reserve Forces of other countries including Australia, New Zealand, Switzerland, Germany and Sweden. Each of these countries has sizeable Reserve Forces and would likely be the source of additional insights. Other countries might be examined as well.

Further investigation is warranted into the results experienced by the various units which have or are implementing the Total Force concept. In particular, research should be carried out with regard to the three Total Force Infantry Battalions which are located in British Columbia, Ontario and Quebec. The units which participated in the implementation of Total Force in the artillery adopted somewhat divergent approaches. This is likely to be true in the infantry as well. An analysis of the results in these three units could be instructive, and would likely be of great assistance in any attempt to ascertain which approach should be undertaken in the future.

Additional research should be conducted using The Integrated Framework of Military Readiness, Unit Attributes and Battle Outcomes as a starting point. The outline of this

continued research would be as follows: A national sample would be obtained which would be more balanced between Regular and Reserve soldiers, both in terms of size and composition and geography. A neutral rating system would be devised which would eliminate the rater effects which were apparent in the original research. Additional administrations of the surveys would be undertaken. This research would be conducted over a number of time periods to overcome the limitations of conducting research in one period only.

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SURVEY INSTRUMENTS

SURVEY INSTRUCTIONS

The survey you are about to complete is being conducted to determine how the Reserves might be improved both operationally and in terms of the benefits that are offered to it's members.

Your answers will be kept entirely confidential and will be seen only by Major Drysdale.

The overall results of the survey, once they have been tabulated, will be provided to the District Commander.

You may feel that you do not have all the information necessary to answer some of the questions. We have taken this into consideration when designing the survey. Please just do your best. Your honesty and truthfulness will be appreciated.

Please remain seated until everyone has finished.

BIOGRAPHICAL INFORMATION (Completed by each individual)

PERSONAL INFORMATION:

Last Name and Initials: _____
Rank: _____
Age: _____
Marital Status: _____

EDUCATION:

(check highest level completed)
Some High School: _____
Completed High School: _____
Some College or University: _____
University Degree: _____

MILITARY EXPERIENCE:

Presently a member of the Reserve Force: _____
Presently a member of the Regular Force: _____
Number of years experience in cadets: _____
Number of years service in Reserve Force: _____
Number of years service in Regular Force: _____

INDIVIDUAL READINESS (Completed for each individual by his superior)

UNIT _____

SUPERVISOR _____

MEMBER BEING RATED _____

IN MY OPINION THIS INDIVIDUAL

Has experience relevant to the job	8	7	6	5	Does not have experience relevant to the job	4	3	2	1
Has knowledge relevant to the job	8	7	6	5	Does not have knowledge relevant to the job	4	3	2	1
Can solve problems independently	8	7	6	5	Is unable to solve problems independently	4	3	2	1
Can be left alone	8	7	6	5	Needs close supervision	4	3	2	1
Always completes tasks on time	8	7	6	5	Never completes tasks on time	4	3	2	1
Is very eager	8	7	6	5	Is very reluctant	4	3	2	1
Has a high desire to achieve	8	7	6	5	Has little desire to achieve	4	3	2	1
Won't quit until done	8	7	6	5	Gives up easily	4	3	2	1
Sees work as an enjoyable activity	8	7	6	5	Has a "thank god it's Friday" attitude	4	3	2	1
Is willing to work alone	8	7	6	5	Is unwilling to work alone	4	3	2	1

.....

Assuming that this individual could train for as long as necessary, how long to you think it would take to bring him up to a standard where he could serve in a low intensity combat situation like the former Yugoslavia.

_____ weeks

Assuming that this individual could train for as long as necessary, how long do you think it would take to bring him up to a standard where he could serve in a high intensity combat situation like what could have been expected against the former Warsaw pact.

_____ weeks

THE INDIVIDUAL CIRCLE / PART 1

(Completed by each individual)

When you think about your service in the army today, to what extent are the following factors sources of satisfaction or dissatisfaction to you? (Circle the appropriate statement)

Relationships with Superiors

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Relationships with Peers

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Relationships with Subordinates

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Efficiency of Military Administration

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Job Security

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Rates of Pay

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Pension Benefits

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Status of Being in the Forces

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Recognition for a Job Well Done

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Opportunities for Personal Growth

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Opportunities for Advancement

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Opportunities to take on Responsibility

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Work Itself

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Sense of Achievement

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

Opportunity to Serve Canada

+	+	+	+
-----	-----	-----	-----
Much	Some	Some	Much
Satisfaction	Satisfaction	Dissatisfaction	Dissatisfaction

THE INDIVIDUAL CIRCLE / PART 2

(Completed by each individual)

How would you rate your motivation toward further service in the army?

Very High	High	Medium	Low	Very Low
-----------	------	--------	-----	----------

What would you say is the likelihood that you will still be serving in the army at various points in the future?

	Probably	Maybe	Unlikely
1 year from now	_____	_____	_____
2 years from now	_____	_____	_____
5 years from now	_____	_____	_____
10 years from now	_____	_____	_____
20 years from now	_____	_____	_____

If you have a family of your own, what kind of effect would you say your being in the forces has had on them.?

Very Positive	Positive	Neutral	Negative	Very Negative
---------------	----------	---------	----------	---------------

How does your military pay compare with what you could make in the civilian world right now? In comparison, Army pay is..

Much Better	Better	About The Same	Worse	Much Worse
-------------	--------	----------------	-------	------------

Reserve soldiers only: What effect would you say your service in the reserves has had on your civilian career or employment prospects?

Very Positive	Positive	Neutral	Negative	Very Negative
---------------	----------	---------	----------	---------------

Regular soldiers only: What effect would you say your service has had on your civilian employment prospects after you leave the forces.

Very Positive	Positive	Neutral	Negative	Very Negative
---------------	----------	---------	----------	---------------

THE GROUP CIRCLE

(Completed by each individual)

If you were to compare this unit today with this or other units you have worked with in the past, how would you rate this unit on the following factors? (Circle the appropriate statement)

Welcoming to new members

+ _____ + _____ + _____ + _____ + _____
 Much Better Better About The Same Worse Much Worse

Discipline

+ _____ + _____ + _____ + _____ + _____
 Much Better Better About The Same Worse Much Worse

Quality of training

+ _____ + _____ + _____ + _____ + _____
 Much Better Better About The Same Worse Much Worse

Leadership

+ _____ + _____ + _____ + _____ + _____
 Much Better Better About The Same Worse Much Worse

Attitude

+ _____ + _____ + _____ + _____ + _____
 Much Better Better About The Same Worse Much Worse

Morale

+ _____ + _____ + _____ + _____ + _____
 Much Better Better About The Same Worse Much Worse

ANALYSIS OF THE RESEARCH INSTRUMENTS

	Scale Range	Min Obs	Max Obs	Mean	Standard Deviation
INDIVIDUAL READINESS					
Job Experience	1 - 8	2	8	6.22	1.20
Job Knowledge	1 - 8	2	8	6.33	1.18
Problem Solving Ability	1 - 8	2	8	6.30	1.24
Ability to take Responsibility	1 - 8	2	8	6.41	1.27
Meeting Job Deadlines	1 - 8	2	8	6.25	1.19
Willingness to Take Responsibility	1 - 8	3	8	6.59	1.18
Achievement Motivation	1 - 8	3	8	6.64	1.12
Persistence	1 - 8	3	8	6.47	1.17
Work Attitude	1 - 8	3	8	6.21	1.12
Independence	1 - 8	3	8	6.61	1.10
Individual Trg Nec for Low Intensity Ops	N/A	0	30	9.43	5.61
Individual Trg Nec for High Intensity Ops	N/A	0	52	17.45	11.12
COLLECTIVE READINESS					
Collective Ability	1 - 5	1	5	3.31	.986
Collective Willingness	1 - 5	1	5	3.27	.924
Collective Performance	1 - 5	1	5	3.33	.969
Collective Trg Nec for Low Intensity Ops	N/A	1	260	16.13	21.20
Collective Trg Nec for High Intensity Ops	N/A	1	160	25.44	22.47
INDIVIDUAL CIRCLE / PART I					
Relationships with Superiors	1 - 4	1	4	3.04	.634
Relationships with Peers	1 - 4	1	4	3.44	.566
Relationships with Subordinates	1 - 4	1	4	3.37	.594
Efficiency of Military Administration	1 - 4	1	4	2.36	.846
Job Security	1 - 4	1	4	2.95	.745
Rates of Pay	1 - 4	1	4	2.57	.790
Pension Benefits	1 - 4	1	4	2.03	1.00
Status of Being in the Forces	1 - 4	1	4	3.20	.739
Recognition for a Job Well Done	1 - 4	1	4	2.97	.745
Opportunities for Personal Growth	1 - 4	1	4	3.01	.677
Opportunities for Advancement	1 - 4	1	4	2.92	.711
Opportunities to take on Responsibilities	1 - 4	1	4	3.28	.656
Work Itself	1 - 4	1	4	3.24	.630
Sense of Achievement	1 - 4	1	4	3.14	.707
Opportunity to Serve Canada	1 - 4	1	4	3.33	.787

APPENDIX II - Analysis of the Survey Instruments

	Scale Range	Min Obs	Max Obs	Mean	Standard Deviation
INDIVIDUAL CIRCLE / PART II					
Motivation Toward Further Service	1 - 5	1	5	3.88	.839
Likelihood of Continued Service	N/A	0	20	6.91	6.05
Effect on Family	1 - 5	1	5	3.30	.949
Comparison of Civilian and Military Pay	1 - 5	1	5	2.38	1.00
Effect of Service on Civilian Prospects	1 - 5	1	5	3.37	.881
GROUP CIRCLE					
Welcoming to New Members	1 - 5	1	5	3.34	.888
Discipline	1 - 5	1	5	3.07	.929
Quality of Training	1 - 5	1	5	3.31	1.00
Leadership	1 - 5	1	5	3.29	.944
Attitude	1 - 5	1	5	3.31	.993
Morale	1 - 5	1	5	3.25	.998
TASK CIRCLE					
Soldier Skills Eval - Raw Scores	N/A	45	96	73.74	13.75
Soldier Skills Eval - Participation	N/A	32	100	77.49	19.26

CONSOLIDATED RECOMMENDATIONS

CHAPTER 3: FUNDAMENTAL ROLES OF THE PRIMARY RESERVE

Augmentation

- 1 The Commission recommends that Militia units selected by Area commanders be asked to provide formed platoons and/or sections for incorporation into Regular Force units proceeding on peacekeeping duties.
- 2 The Commission further recommends that, on United Nations and other operations, junior Militia officers, wherever practical, be employed in command of troops rather than as liaison officers or in other staff positions, as now frequently occurs.
- 3 The Commission recommends that all Reservists returning from overseas service be entitled to an immediate disembarkation leave of two weeks, as at present, followed by six weeks of paid employment and screening with the unit with which they served.

Basis for Mobilisation

- 4 The Commission recommends that a national mobilisation plan be drafted and put in place with all dispatch.
- 5 The Commission recommends that the definition of stages 3 and 4 in the four-phase mobilisation scheme set out in the 1994 White Paper on defence be amended immediately to reflect clearly defined roles for the Reserve Forces, and especially the Militia, as the basis for recruitment, training, and the provision of formed units required in the event of a major conflict.

CHAPTER 5: THE MILITIA

Revised Structure

- 6 The Commission recommends that the Districts be eliminated and that they be replaced by seven Militia brigade groups, each commanded by an officer in the rank of Colonel.
- 7 The Commission recommends that the four existing Area Headquarters be retained, but reorganised as and renamed Divisional Headquarters.

Organisation

- 8 The Commission recommends, in determining the relative viability of existing Militia units, that the following factors, to be applied in the context of the reduced Militia paid ceiling of 14,500 and the revised Militia structure incorporating seven brigade

headquarters, must be taken into account in this order of priority:

(a) Operational Requirements

While the unit must be prepared to meet its mobilisation tasks in phase 3 and 4, it must also be prepared - and have demonstrated its capability - to provide augmentees to meet the demands of the present situation.

(b) Capacity to Recruit and Retain Effective Strength

Over time (say, the last five years), the unit must have demonstrated its ability to recruit effectively and to retain its personnel at or near its paid ceiling. In demographic terms, it must also have access to a nearby pool of potential recruits or be willing to relocate.

(c) Capacity to Train Individually and Collectively

The unit must have demonstrated that it can train effectively and that its personnel can qualify in high percentages on the Individual Battle Training Standards and perform with reasonable effectiveness in collective (platoon and company) exercises.

(d) Regular Force Support

The unit must have demonstrated its ability to make effective use of Regular Force support in training.

(e) Cost Effectiveness

The unit must have demonstrated the ability to manage its personnel, operating, and maintenance budgets effectively.

(f) Historical Performance and Battle Honours

The unit record in war and peace should be considered, so as to reinforce success.

(g) Footprint and Link to the Community

The unit must be geographically located so as to serve as a link between the military and the general population. It must also enjoy the support of the community in which it functions.

9 The Commission recommends that the Total Army Establishment be put in place, and that LFC Headquarters make every effort to disseminate information to units in order to correct the misinformation that surrounds the project.

Restructuring Process

10 The Commission recommends the following restructuring process: That LFC direct the Area Commanders to plan their internal restructuring using the following guidelines:

- (a) Each Land Force Area will cut its paid ceiling by approximately 25 percent, so as to move from the current paid ceiling to a new paid ceiling of 14,500 by April 1, 1999.
- (b) Militia brigade groups, in terms of numbers of units, will be organised with some discretion within each Area.
- (c) Units will be structured to conform to Total Army Establishment with a minimum of overhead. Each unit must constitute an effective training vehicle.
- (d) Existing units that might be amalgamated or relegated to the Supplementary Order of Battle in this restructuring process should be, wherever practical, assigned a role in phase 4 of the mobilisation plan.
- (e) The number of armouries will be reduced to the minimum required to support the new Militia structure, with due regard being paid to cost-benefit analyses, heritage properties, sale of land and buildings where this can be done advantageously, and the urban transportation networks in the large cities. The armoury reductions might necessitate sharing of facilities by units and even by different elements of the Reserves, wherever this proves economical.
- (f) The restructuring process will commence no later than the beginning of April 1996.
- (g) Currently serving Reservists will be direct and effective participants in the formulation of the Area plans for restructuring. The Militia, in other words, must be actively involved in determining which units remain. LFC HQ will review the Area submissions, and present its recommendations to Armed Forces Council and the Defence Council for approval no later than July 1, 1996.

Budgeting Process: Personnel, Operations and Maintenance

11 The Commission recommends that every Militia unit should be guaranteed funding of four days per month for each of its effective members to receive the required training for the September-May period. The unit must devote these funds entirely and directly to training its members.

12 The Commission also recommends that the level of funding necessary to exercise command, control, and administration of units be quantified, and that units be funded accordingly.

13 The Commission further recommends that any delegation of tasks to units (such as collective training) be accompanied by the funds necessary to execute the tasks.

14 The Commission recommends that increased authority and flexibility be delegated to Reserve units to manage the operations and maintenance costs of their units and their infrastructure.

CHAPTER 6: THE AIR RESERVE

Contingency Support Wing

15 The Commission recommends that the establishment of new Contingency Support Wing units be reviewed so that redundant Militia units, if properly sited or willing to relocate, can be considered for CSW roles.

CHAPTER 7: THE COMMUNICATION RESERVE

Militia Signals

16 The Commission recommends that command and control over the recreated Militia field signals units be returned to Land Force Command at the earliest possible time.

CHAPTER 8: THE SUPPLEMENTARY RESERVE

17 The Commission recommends that it be a condition of joining the Canadian Forces that all trained personnel, officers, and NCMs, Regular or Reserve, will be enrolled in the Supplementary Ready Reserve on leaving the Canadian Forces. After five years or at age 55, whichever is earlier, to take into account the process of ageing and the ephemeral nature of military skills, all enrollees will be placed on a restructured Supplementary Holding Reserve List where they will remain until age 65.

Other than the possibility of being put on active service by the Governor-in-Council, Supplementary Ready Reserve members, like those in the Supplementary Holding Reserve, have no obligation placed upon them. If a member volunteers for service, he or she is subject to the usual terms of service.

18 The Commission further recommends that personnel honourably released from the Canadian Forces retain their service uniforms.

CHAPTER 9: THE CANADIAN RANGERS AND THE CADET INSTRUCTORS CADRE

The Canadian Rangers

Enhancement of the Program

19 The Commission recommends that the Canadian Rangers Program be continued and enhanced.

20 The Commission recommends that the Bold Eagle Program be continued for two more years and then a decision made on its continuance. If the Bold Eagle Program is discontinued, the Commission recommends that the Canadian Rangers Program (with its concept of operations and terms of service unchanged) be expanded to absorb the Bold Eagle scheme.

The Cadet Instructor Cadre

Structure and Roles

21 The Commission recommends that the Cadet Instructor Cadre remain a component of the Reserve Force, and that the desirability of expanding the CIC with an NCM component be seriously considered.

22 The Commission recommends that the modest increase in financial support for the Cadet Program indicated in the 1994 White Paper on Defence remain departmental policy.

23 The Commission recommends that the issue of command and control as it affects the Cadet Program be reviewed.

CHAPTER 10: ADMINISTERING THE RESERVE FORCE

Recruitment

24 The Commission recommends that conditional enrolment be considered, before the completion of reliability checks. It also recommends that all necessary measures be implemented to modernise and to speed up the processing time required for enrolment in the Canadian Forces, a process that should be completed within one month.

25 The Commission recommends that the Regular Force first attempt to meet its specialist needs by considering the availability of such individuals from the Reserve Force, and contract directly with civilians only if it has been determined that the appropriate persons cannot be found in the Reserves.

26 The Commission recommends that all necessary steps be taken to assist Reserve units to recruit the specialists that may be needed from time to time, including maximising the harmonisation of civilian and military qualifications.

Administrative Burden

27 The Commission recommends that Operation Red Tape be extended to the Primary Reserve.

Training and Equipment

28 The Commission recommends that training courses be made, insofar as possible, accessible to Reservists by carving them into segments of two to three weeks.

29 The Commission recommends that Reservists and Regulars should serve in each other's units and formations; that Regular officers should at some point in their career serve with the Reserves; and that the staff colleges should provide places for Reservists as well as an appropriate curriculum dealing with Reserve and mobilisation matters.

30 The Commission recommends that the equipment required for training be identified and that pooling arrangements be made so that units have access to that equipment on a regular basis.

Attrition

31 The Commission recommends that the Department of National Defence establish a trial program of engagement bonuses for a three year period. The effect of the bonuses on recruitment and attrition rates should be carefully monitored.

CHAPTER 11: PERMEABILITY BETWEEN THE REGULAR AND THE RESERVE COMPONENTS

32 The Commission recommends that the administrative membrane that divides the Regular and Reserve Forces be made more permeable so as to allow consecutive and uninterrupted service between the Regular and the Reserve components of the Canadian Forces.

CHAPTER 12: TERMS AND CLASSES OF SERVICE

Obligation to Serve

33 The Commission recommends that, on being recruited, a Reservist be made to sign a clearly worded contract, setting out his or her training and other obligations and the effect on pay if these obligations are not fulfilled, and providing a commitment on behalf of the Canadian Forces to guarantee a stated minimum number of training days.

Pay and Benefits

34 The Commission recommends that, everything else being equal, Reservists should receive identical or equivalent benefits to those provided to Regulars.

35 The Commission recommends that the Department of National Defence take immediate steps to establish Reserve pay at a minimum of 85 percent of the Regular pay scale for each rank.

36 The Commission recommends that Reservists on Class C service within Canada should not serve at or be paid less than their Reserve Force rank when they fill a position appropriate to that rank.

Increased Commitment for RETP Graduates

37 The Commission recommends that, for RETP graduates, the required term of Primary Reserve service ought to be five years in the first 10 years after graduation. If such service is not secured, then all the real cost of the education received should be treated as a repayable loan.

CHAPTER 13: RESERVE PAY SYSTEM

38 The Commission recommends that a revised pay system be implemented immediately, and that any incremental funds required to do so not be drawn from the Reserve budget.

39 The Commission recommends that the revised pay system be continued in parallel, until it is proven that RIIP operates effectively.

40 The Commission recommends that NDHQ consider totally integrating the pay and personnel systems for the Reserve Force and the Regular Force.

CHAPTER 14: JOB PROTECTION LEGISLATION

41 The Commission recommends that job protection legislation be drafted and presented to Parliament as soon as possible. The bill should address, at a minimum, providing additional time (with or without pay) for Reserve training, as well as obliging an employer to accommodate, if reasonably possible, a Reservist's request for longer-term leave (without pay) for the purposes of participating in Canadian Forces operations.