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CONTRACTORS ON THE BATTLEFIELD - NOT A SILVER BULLET

LES ENTREPENEURS SUR LE CHAMP DE BATAILLE – PAS UNE PANACÉE

A Thesis Submitted

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By

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ABSTRACT

Western militaries are increasingly using contractors on the battlefield to provide support services to their forces, with some authors suggesting that contractors provide the solution to a number of the support shortfalls that exist within today's military. Contractors can be a very effective way of providing support service, but they are not a panacea as there are limitations on their ultimate ability to provide military support. Despite their advantages, there are a significant number of factors and implications that must be considered before contractors are deployed to the battlefield, and care must be taken that they are not presented as a 'silver bullet' solution to negate support shortfalls.

This paper will review the reasons why militaries have adopted use of contractors and then examine the factors and issues that use of contractors brings to the theatre commander. Reference will be made to recent Canadian and U.S contractor experience as well as doctrinal issues. The paper will also propose a requirement to develop doctrinal methodology that will assist operational commanders in deciding when, and when not to, utilize contractors as part of the theatre support architecture. The paper concludes by recommending the CF only consider use of contractors when operational success will not be jeopardized, that contractor doctrine be developed and promulgated before contractor use is invoked, and that contractor capability be considered an augmentation capability rather than a replacement capability.

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CONTRACTORS ON THE BATTLEFIELD – NOT A SIVLER BULLET

By Major CD Hobbs

Without supplies, neither a general nor a soldier is good for anything.
Clearchus, 401 BC

Romantically heroic politicians and gung-ho generals notwithstanding, the aim of a military organization is not to make do with the smallest number of supporting troops, but to produce the greatest possible fighting power.
Martin Van Crefeld, *Supplying War*

CHAPTER 1 – INTRODUCTION

1.1 Introduction

The period since the end of the Cold War has been a time of tremendous change for western militaries, and the Canadian Forces (CF) has not been excluded from this phenomenon. A rising federal debt, and the expectation of a peace dividend at the end of the Cold War, resulted in a reduction in the CF budget of some 5 billion dollars or approximately 33%, and a concurrent reduction in personnel by some 22,000, or 25% since 1990.[1] These reductions were coupled with an increase in operational deployments

[1] The DND budget in 1990 was $15.1 billion for 82,000 troops and in 2000 was $10.2 billion for 60,000 troops. All budget figures are in 2000 year dollars. Making sense out of Dollars 2000-2001, ADM(Fin) website, http://www.forces.ca/admfincs/financial_docs/msood_e.asp accessed 25 Feb 2002.

to an unprecedented degree, with 55 different deployments having occurred since 1990.[2] The net result was a requirement to 'do more with less,' placing a severe strain on CF personnel and infrastructure.

Superimposed on the high operational tempo was a high corporate change tempo. The reduced budgets and personnel strengths, fallout from the Somalia affair, and change throughout government forced the Department of National Defence (DND) to make substantial changes in the way it functioned. National Defence Headquarters (NDHQ) was reorganized, and the three Environmental Headquarters were reduced in size and moved to Ottawa. Almost all functions within DND were reviewed, and activity not considered 'core' was deleted or reduced. In an effort to maintain the combat forces at reasonable levels, substantial cuts were made in combat support and combat service support forces in both field units and on support bases.

Many different programs were initiated in order to maintain, or at least provide, some access to those services that would no longer remain embedded within the CF structure. The majority of these initiatives involved some form of 'contractor support' or 'Alternate Service Delivery (ASD),' at either corporate, base or unit level. Although their implementation has often been couched in 'money saving' or 'better efficiency' terms, this has not always been achieved, and the final decision on whether they will be

[2] Numbers from DCDS website http://www.forces.ca/dcds/force_e.htm accessed 25 Feb 02.

more efficient over the long run remains outstanding. In some cases, 'in-house' military bids, such as the provision of food services in Trenton or the operation of the Publications Depot, proved to be more cost effective than contractor proposals and the services have remained within DND rather than being contracted out. In other cases contractors have become the means by which service support will be provided. Examples of this approach include the Marine Coastal Defence Vessels (MCDV), the Bell Griffon helicopter fleet, the Cormorant Search and Rescue helicopter, and potentially the Sea King helicopter replacement fleet.

Use of civilian contractors is not new; most military's have used contractors in the past, and will again in the future.

> All facets of general logistics support have been contracted [by the U.S. Army] at one time or another during this century, including food, laundry, sanitation, shower service, security, recreation, translator service, terminal and base camp operations, water and power production, and medical service support.[3]

The Canadian experience has been roughly similar to the United States (U.S.), with contractor support being used throughout most of our history. However, despite the positive use of contractors in the past, we must remain cautious in our future use of contractors by ensuring we have put in place the correct structures to employ them effectively. Contractor support is just one mechanism available for the provision of

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[3] James E. Althouse, "Contractors on the Battlefield: What Doctrine Says, and Doesn't Say." Army Logistician Volume 30, Issue 6, (Nov-Dec 1998): 14.

support to operations; there is a need to ensure the CF remains cognisant of the advantages and limitations of using contractors in support of operations. This is particularly so as the CF focuses towards expeditionary operations involving asymmetric threats in areas with limited infrastructure. Contractors will not replace or negate all the support shortfalls that exist in the CF today, but can be a force multiplier in specific situations if the full implications of their use are understood.

1.2 Scope of the Paper

This paper will commence with a literature review, particularly of the U.S. who is in the forefront in the use of contractors. The aim and purpose of the paper will be followed by a selected summary of present contractor use, a review of the types of contractor support available, and the services that potentially can be contracted. The reasons to use contractors will be examined, as these drive many of the decisions to utilize contract support. This will be followed by a chapter on the factors that need to be considered in the use of contractor support, and the implications these factors have on operations and the development of the theatre support structure. Special emphasis will be placed on identifying those issues that relate to the threat and response time available for the deployment of contractors. A graph will be proposed which will attempt to model the correlation between some of the issues involved in trying to determine the appropriate use of contractors for any theatre. The paper will conclude by making recommendations for those areas where the CF will need to develop policy and procedures if it intends to usefully employ contractors on the battlefield effectively.

1.3 Literature Review

The last ten years have seen an emphasis and recognition of the increasing requirement to use contractors on the battlefield. A review of the available literature indicates that while there is an increasing recognition of the potential advantages of using contractors, there is also recognition of the additional requirements and risks their use invokes. The U.S., in particular, is in the lead of developing and implementing institutional structures that address both the advantages and disadvantages that contractors can bring to the battlefield.

The early use of contractors by the U.S. is very effectively covered in Vincent Demma's "Contractors on the Battlefield: An Historical Survey from the Civil War to Bosnia" [1999] paper. Although written from a U.S. perspective, many of the fundamental contracting issues that were applicable to the U.S. were also applicable to other nations at the time. The most recent large-scale U.S. wartime contracting activity is covered by William Pagonis in his book "Moving Mountains" [1992] on support to the Gulf War. David Moore and Peter Antill examine U.K. contract activity since the end of the Cold War in their "British Army Logistics and Contractors on the Battlefield" [2000] article. In "Contractors in British Logistics Support" [2001], David Reeve identifies both positive and risk areas on the UK use of contractors.

The majority of the literature reviewed is supportive of the use of contractors on the battlefield, providing that care is exercised. Norman Williams and Jon Schandelmeier's article "Contractors on the Battlefield" [1999] reviews the U.S. requirement for contractors at the strategic, operational and tactical levels. Eric Wagner, in "Contingency Contracting: Combat Multiplier for the Commander" [1998], expands on the role and advantages of contingency contractors, and in a second article "Contingency Contracting for a Special Forces Group" [1999], focuses specifically on contract support to special ecifical'

The operational use of contractors dictates that doctrine and training needs to be in place if contractors are to be effectively utilized. James Althouse's article "Contractors on the Battlefield: What Doctrine Says, and Doesn't Say" [1998] identifies shortfalls in U.S. contract doctrine and policy in an article particularly relevant to Canada, which at present has little doctrine or training in place to support the use of contractors on operations. William Bond and Nicholas Castrinos also focus on doctrinal issues concerning the use of contingency contracting staff in their article "Contingency Contracting: Strengthening the Tail" [1999]. Joe Fortner and Ron Jaeckle, in an article entitled "Institutionalizing Contractors on the Battlefield" [1998], identify principles that would allow for the development of an institutional framework that incorporates the use of contractors. Joe Fortner updated these principles in "Institutionalizing Contractor Support on the Battlefield" [2000], and illustrated how they have become incorporated into current U.S. Army doctrinal publications (FM100-21 Contractors on the Battlefield [2000] and FM 100-10-2 Contracting Support on the Battlefield [1999]).

In addition to the doctrinal and institutional frameworks that need to be in place, there are a number of actions must be taken by operational commanders if contractors are to be effectively utilized. Isolde Garcia-Perez's article "Contractors on the Battlefield in the 21st Century" [1999] reviews the implications in this area including the different types of contractors, their role, command and control considerations, support requirements, risk assessments and the need for training. David Young's "Planning: The Key to Contractors

on the Battlefield" [1999] article concentrates on the requirement for advanced planning if contractors are to be used to advantage. Joe Fortner, in "Managing, Deploying, Sustaining and Protecting Contractors on the Battlefield" [2000] covers similar areas, identifying contract management, deployment training, sustainment, use of government materiel, protection and legal status as some of the areas that need to be addressed.

A number of authors have expressed concerns about the increasing reliance on the use of contractors. Sylvester Brown's article "Using Third Party Logistics Companies" [1999] conducted a survey of U.S. logistics support contractors and determined that many are not capable of providing worldwide support, and many are not interested in placing their employees in potential danger areas. Eric Orsini and Gary Bublitz identify in "Contractors on the Battlefield: Risks on the Road Ahead?" [1999] a number of risk areas in the U.S. approach to contracting, including contractor readiness, capability, flexibility, security, force structure and an increased requirement for contractor technical support 'stovepipes'. Joe Fortner's previously mentioned article "Institutionalizing Contractor Support on the Battlefield" [2000] also identifies several legal issues that prevent the use of contractors in specific circumstances. Additional legal aspects of contractor use are expanded in G.R. Rubin's "Peace Support Operations and Practical Legal Problems 'On the Ground'." [1999]. Canadian concerns about the use of contractors are reviewed in papers by Maj D. McCarthy "Contractors on the Battlefield: A Risky Proposal" [1999] and Cdr T.H. Addison "Contractors on the Battlefield – Have We Done Our Homework?" [2000].

1.4 Aim

The CF are increasingly using contractors on the battlefield for the provision of support services. To date, use of contractors has been driven by a number of imperatives such as economics or operations tempo, but there appears to have been little corporate review of the issues and implications for using contractors. There is virtually no CF doctrine written on the subject, our corporate structure has not been adjusted, nor has training been instituted for employment of contractors despite the fact contractors are already on the battlefield in places like Bosnia and adopted for the MCDV fleet. The use of contractors has significant doctrinal, structural and operational effectiveness issues that affect our ability to develop a high readiness, globally deployable force.

The aim of this paper is to look at the factors that affect the use of contractor support, and to highlight those issues that should be of particular concern to the CF. Contractors are not a 'silver bullet' that will resolve all the support shortfalls that presently exist in the CF, but rather are just another support tool that, if applied properly, will allow the CF to complete its tasks effectively. However, like any tool that is used improperly, inappropriate expectations on the use of contractors will have significant implications that could ultimately jeopardise operations.

CHAPTER 2 – PAST USE OF CONTRACTORS

2.1 Introduction

Contractors have been used on operations for many centuries. There are reports of contractors supporting military operations as early as the 16th century, and certainly by the 1800's contractors had become an integral part of military operations.[4] This trend has continued throughout the 1900s, with the emphasis shifting towards the provision of technical support.

2.2 The United States

Almost since its inception, the U.S. Army has used contractors on the battlefield. The relationship commenced in 1775, when "General George Washington used contractors to supply rations and equipment to the Continental Army during the Revolutionary War."[5] During the American Civil War, there was a substantial use of contractors, particularly in the transportation and labour areas. The arrival of railways and telegraphs offered new technologies the military quickly took advantage of. Other

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[4] Althouse 14.

[5] Virginia H. Ezell, "Logisticians and Contractors Team for LOGCAP Exercise." Army Logistician, Volume 31, Issue 6, (Nov-Dec 1999): 16-17.

transportation means such as wagon trains or horses, riverboats and sailing craft were also contracted in large numbers to support the war effort. Construction labourers were required to construct innumerable facilities including buildings, wharves, field camps, warehouses, hospitals, and maintenance facilities. Mechanics were required to repair machinery and weapons. In order to control the number of civilian contractors, "eventually, the Army organized a Construction Corps that consisted of thousands of civilians under military supervision."[6]

During World War I, the U.S. Army continued to rely on the use of civilians on the battlefield, particularly because much of the Army support was provided by European nations as part of host nation (HN) agreements. In order to allow the majority of the Americans to remain soldiers, civilians were employed in large numbers in "labor intensive logistics activities such as ports and depots. By late 1918, the [American Expeditionary Force] AEF's civilian contact labor force had a strength of 85,000. For every twenty American soldiers in France, about one civilian was under contract to the Army."[7]

World War II continued the trend to using civilians to provide support that was not integral to the Army. Similar to World War I, the U.S. Army had insufficient labour

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[6] Vincent Demma, "Contractors on the Battlefield: An Historical Survey from the Civil War to Bosnia," U.S. Army Center of Military History, Fort McNair, DC, 1999, 1.

[7] Demma 2.

and logistic support capability within its structure, and required a substantial number of civilians in order to sustain the force. These provided the full range of supply, transportation, maintenance, labour, and construction functions that the war effort demanded. "Overall, the approximately 5.6 million U.S. soldiers that served overseas during the war were supported by an estimated 734,000 civilians, a ratio of nearly one civilian for every seven service members."[8]

The Korean War saw even greater reliance on civilian contractors for the U.S., with civilians contributing to almost every aspect of support. Within Korea, they provided substantial support in the areas of port services, transportation, shipping, road construction and repair, communications and labour. In Japan, civilians were responsible for the provision of a substantial amount of support, particularly in the procurement, manufacturing and assembly areas. "Seventeen months after the war began, there was one civilian to support every 2.5 soldiers [or] an additional 250,000 soldiers would have been required."[9]

Vietnam again saw the use of substantial numbers of civilian contractors for a number of reasons. The U.S. Army support structure had significant support personnel shortages because of conversion of military positions to civilians, a political decision that

[8] Demma 4.

[9] Demma 7.

limited in-theatre force ceilings, insecure land Lines of Communications (LOCs) that required additional support self-sufficiency, and an increased level of weapons technology demanded higher levels of maintenance that could only be provided by manufacturer representatives. All of these factors resulted in increased numbers of civilian contractors supporting operations in Vietnam.

The Gulf War saw extensive use of contractors, particularly for weapons support. The American strategy was to deploy forces as quickly as possible into Saudi Arabia, but the immediate Iraqi threat required combat troops to be deployed before support forces. Consequently, there was an immediate demand for contractors, particularly in the areas of port operations, transportation and life support.[10] Even when military resources became available, the final support requirements were so large the U.S. Army had difficulty meeting the requirement, and used a substantial number of Saudi contractors to provide the shortfalls. Additionally, the increasingly technical nature of weapons systems such as ships, the Patriot missile, Abrams tank, communications, helicopters and aircraft required increased levels of in-theatre American contractor support. The degree of contractor support included "76 U.S. contractors deployed with 969 personnel to provide maintenance, technical assistance, and equipment support,"[11] large numbers of deployed U.S Army civilian staff "2,000 Army civilians deployed to Saudi Arabia, where they

[10] Life support is defined as accommodation, feeding, water, laundry, cleaning, sewage etc.

[11] Eric A. Orsini and Gary T. Bublitz, "Contractors on the Battlefield: Risks on the Road Ahead?" Army Logistician, Volume 31, Issue 1, (Jan-Feb 1999): 130.

performed functions ranging from repairing equipment to contracting for supplies,"[12] and "9,200 contractors to support a military force of 541,000."[13]

2.3 Canada

Canada's past experience with contractors has been similar to that of the U.S., with contractors being used during major conflicts such as the World Wars and Korea, and smaller operational conflicts such as peace support operations. More recently, as part of the OP ABACUS preparations for the Year 2000 (Y2K) potential computer failure, the CF initiated a substantial contract to provide contractor support services on a 'just-in-case' basis. The ATCO-Frontec Logistics Corporation received a $10 million contract (called Logistics Contractor Augmentation Support (LOGCAS)) to provide support services across Canada in order to release CF service support personnel for other duties they potentially would have to undertake.[14] This contract was considered successful, although the lack of any significant Y2K problems meant the support services within the contract were not actually utilized. However, LOGCAS marked one of the first occasions in recent times where Canadian industry was requested, and appeared able to provide support services to a large CF operational requirement, although in a non-hostile, Canadian environment. One of the benefits of the LOGCAS contract was it provided

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[12] Jody Brenner, "Deployment and Civilians: What Incentives Do We Need?" Army Logistician, Volume 31, Issue 4, (Jul-Aug 1999): 38.

[13] Marilyn Harris, "LOGCAP: The Nation's Premier Contingency Contracting Program For Force XXI," U.S. Army War College, Carlisle PA, 14 April 2000, 3.

DND a recent opportunity to review the lessons learned and incorporate those into future contracts for the potential use of contractors in more hostile environments, or on deployments outside Canada.

[14] Macarena Barker and Pam Hatton, "Contractors in Support of Operations: A Canadian Perspective," PASOLS LOG. Number 20, (August 2000): 13.

CHAPTER 3 – PRESENT AND FUTURE USE OF CONTRACTORS

3.1 Introduction

A significant number of countries are increasingly using contractors to deliver support services on operational missions. There are various types of contractors that are capable of delivering services to operations, and a complete range of services that can be delivered. The U.S. has led in this area for a number of years, with the U.S. Army Logistics Civil Augmentation Program (LOGCAP) contract becoming a reference model that other countries such as the UK, Canada, and Australia are examining and adopting as appropriate. Canada has initiated a number of contractor support programs, including the Bosnia Contractor Support Program (CSP), the Griffon helicopter, and the MCDV, with others such as the Canadian Contractor Assistance Program (CANCAP), being considered.

3.2 Types of Contractors

Different nations use different terms to describe the various types of battlefield contractors, which range from specific equipment contractors to system contractors to contingency contractors. To differentiate between the various types of services that are provided, and the organizations that are responsible for the contractor, the U.S. Army has

defined in FM 100-10-2 three different types of contractors as system, external support, and theatre support.[15] There are significant differences in the skills that each of these types of contractors brings to the battlefield, and in the degree of control the battlefield commander has over them.

System contractors are equipment manufacturer representatives who typically provide life cycle, maintenance or upgrade services to specific systems such as weapons, vehicles, ships or aircraft. System contractors are generally utilized because the equipment complexity is greater than the military is capable of maintaining, or because a strategic decision has been made to have the manufacturers provide the support as a more effective means of supporting the equipment. Canada has chosen to utilize system contractors for several major equipments including support to the Bell Griffon helicopter fleet and the MCDV fleet. The procurement of increasingly complex new weapon systems will undoubtedly result in additional system contractors being utilized to provide system support that the CF will be unable to provide from internal resources.

External support contractors provide support services that are common throughout the forces, and not specific to a particular theatre of operations. These are prearranged central agency contracts with the contractor responsible to provide the service across the entire CF. Canadian examples include the use of the Royal LePage Company for the

[15] United States, Department of the Army Publication FM 100-10-2, Contracting Support on the Battlefield, (Washington, 4 August 1999): 2-15.

administration of DND moves, and potentially the use of a civilian contractor to provide supply support as proposed by the Supply Chain Project (SCP).

The third category is contingency contractors, who provide support to specific contingency operations.[16] Contingency contractors can be divided into two different sub categories. The first is operation specific contracts arranged in-theatre in direct response to an immediate requirement, and the second is pre-arranged contracts that are invoked in support of theatre requirements. A Canadian example of an operation specific contract would be the hiring of local personnel to be translators in Bosnia or Kosovo. An example of a pre-arranged contract is the LOGCAS services contract that was negotiated in support of OP ABACUS.

There are some significant implications for the theatre commander between these different types of contractors. Traditionally, system and central contractors are provided to the theatre commander, who will have little control over them, but rather will have to involve the agency that controls the central contract if significant changes are required. The theatre commander has more authority over contingency contractors because normally he is responsible for their activity, so therefore he will have substantially more control over their workload, priorities and capabilities.

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[16] Isolde K. Garcia-Perez, "Contractors on the Battlefield in the 21st Century." Army Logistician, Volume 31, Issue 6, (Nov-Dec 1999): 41.

3.3 Services Provided by Contractors

In theory, virtually any service can be contracted, although in reality there are limitations. For operations, contractor support will generally consist of both system and contingency contractors, with each concentrating within their own area of expertise.

System contractors provide maintenance support to specific weapon systems and platforms, usually providing both spare parts and repairs as part of an overall contract for that system. "Their most common functions are sustainment maintenance and item management. They tend to perform very specific and precisely defined activities,"[17] as defined in the contract. The decision to use a system contractor is a strategic one that has to be made early in the procurement process as this support strategy has long-term implications with regard to spares, training, and maintenance. As weapon systems have become more complex, the use of system contractors has increased because militaries often cannot justify the procurement of very expensive repair and diagnostic tooling, or the expensive training of very limited numbers of technicians in specialized areas.

Contingency contractors traditionally provide support services to specific operational theatres. As such, they can provide a wide range of services in all areas of accommodation and life support. Canada, as part of its CANCAP project, has stated the following areas as being potentially suitable for contractor support in operational theatres.

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[17] Joe A. Fortner and Ron Jaeckle, "Institutionalizing Contractors on the Battlefield," Army Logistician Volume 30, Issue 6, (Nov-Dec 1998): 12.

a. logistics: to include warehousing, custodial services, materiel handling and distribution, passenger and cargo ground transportation, bulk fuel, and heavy vehicle equipment operation;

b. facility management and personnel support: to include billeting, accommodations, laundry, food services to include preparation and feeding;

c. engineering: engineering support services to include environmental, power supply and distribution, water supply and distribution, waste management, facility operations, management and maintenance, roads and grounds, fires services, potable water, sanitation and showers;

d. communications and information: services to include connectivity to required systems less encryption, line, unclassified telephone services, system accreditation, and wideband connectivity between specified semi-permanent locations;

e. equipment and materiel maintenance and repair: preventive maintenance, corrective maintenance, recovery including planning and control, and maintenance support functions. Materiel includes ammunition; and

f. medical and health: health information management, evacuation (ambulance team and air evacuation), health service support and re-supply, medical administration at the clinic level progressing to the Surgical Centre/hospital level, treatment including diagnostics from the primary care level through to medical/surgical intervention at the Surgical Centre/hospital level.[18]

In addition to those listed above, there are other areas where contractors can provide services to the military. The U.S. has frequently used contracted stevedore and

[18] List from the CANCAP website Letter of Interest for Service Support Capability and Management Planning. http://www.dnd.ca/j4log/cancap/loi_Merx_e.htm accessed 23 Feb 02: 2.

long shore capabilities to assist in port operations during deployments,[19] and uses contractors to "perform necessary services for which no U.S. military capability exists, such as sewage treatment and disposal."[20] For the East Timor operation, the U.S. forces innovatively used "the LOGCAP contract to include the procurement of a large commercial hotel barge already moored in Dili Harbour. By using the barge and its crew, [U.S. Support Group East Timor] USGET personnel would be provided with billeting, food, water, and even laundry services, as well as exercise and recreational facilities."[21] This idea may have come from the Gulf War, where the U.S. used a moored cruise ship as a means to provide a rest and recreation area for its soldiers in Saudi Arabia.[22]

3.4 Canada

3.4.1 Introduction

Canada is employing contractors in operational theatres and to support equipment that have operational roles. Some of the more recent initiatives include Bosnia, the Griffon helicopter, and the MCDV fleet, with additional initiatives underway with the CANCAP and Bosnia Contractor Support Programme (CSP) projects.

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[19] Fortner, "Institutionalizing Contractors on the Battlefield" 12.

[20] Fortner, "Institutionalizing Contractors on the Battlefield" 12.

[21] Phillip M. Mattox and William A. Guinn, "Contingency Contracting in East Timor," Army Logistician (Jul-Aug 2000): 34.

[22] William G. Pagonis, Moving Mountains, Lessons in Leadership and Logistics from the Gulf War (Boston: Harvard Business School Press, 1992) 130.

3.4.2 Bosnia Contractor Support Programme

In June 1999, DND decided to reduce the number of support soldiers deployed in Bosnia by using contractor personnel as replacements for support soldiers. This decision was made because of severe problems in providing the 1500 support soldiers required for the missions of that year. A project was initiated to engage industry (preferably Canadian) to provide support services to the Canadian Contingent in Bosnia over a two-year trial period. The resultant Balkans Rationalization Contractor Support Project (Bosnia CSP) had three major objectives: to reduce the number of support troops in theatre; to reduce the number of rotations that support troops would potentially have to undergo; and to initiate a partnership with Canadian industry to provide support services to operations.

In June 2000, Public Works and Government Services Canada (PWGSC) signed a fixed price contract with ATCO-Frontec for the provision of a broad range of services to be provided to the CF in Bosnia. This contract covered supply, local procurement, materiel processing, fuel, laundry, billeting, catering, equipment maintenance, communications, vehicle transportation, accommodation services and building and ground maintenance services. ATCO-Frontec is the prime contractor, but has utilized a number of specialist sub-contractors because of the scope of the services required. The contract has resulted in the 271 person NSE being reduced by approximately 183 soldiers

per six-month rotation, although some 88 soldiers remain 'embedded' in the Contingent support structure to fill positions deemed military essential.[23]

This project is ongoing so it is difficult to define its final success. On the positive side, it has provided both industry and DND an opportunity to develop a longer-term partnership/association in an area where none had existed before, and some 700 support soldiers (four rotations of 180) have not had to deploy to Bosnia, although some of them may have deployed to other locations such as Ethiopia. On the negative side, there have been a number of problems that are still being addressed. The contractor has had difficulty in filling and maintaining personnel in some positions, resulting in soldiers having to fill positions that are the contractor's responsibility. The camp is relatively austere and severe, and many of the contractor staff are not prepared for these conditions. The morale of the embedded soldiers has also been affected; they are uncomfortable working for civilian bosses, and are unhappy they have to do all the guard and sentry duties, and from reduced numbers as well.[24]

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[23] NDHQ 3350-1 (J4 Log) November 2001 memorandum. DND has declared 88 positions military essential in order to maintain a pool of soldiers for sentry or security duty, to provide soldiers in direct support of operations, and to provide a minimum military capability should the contractor no longer be able to provide services.

[24] NDHQ, 3350-1 (J4 Log) Memorandum, BALKANS CONTRACTOR SUPPORT PROJECT (CSP) REVIEW TEAM – INITIAL DRAFT OF FINDINGS, Ottawa, November 2001, 9.

3.4.3 Griffon Helicopter

The Bell Griffon helicopter, the present CF tactical lift helicopter, uses a combination of both contractor and military personnel for its support. First-line maintenance and parts exchange is done by military personnel, with parts repair and higher-level maintenance being conducted by Bell personnel in Bell facilities. Parts required are either shipped direct to helicopter garrisons in Canada, or to Trenton for onward shipment by DND if required, to an operational area such as Bosnia. Major maintenance or upgrade of deployed aircraft is accomplished by moving the aircraft from the deployment area to one of the Bell facilities around the world. Bell has indicated they would be prepared to use their personnel closer to the battlefield, subject to the threat scenario, if DND wished to amend the present contract. This particular contract has proven to be very responsive and economical, with savings having been achieved in the personnel and parts stockholding areas, and without incurring significant operational deficiencies.[25]

3.4.4 Maritime Coastal Defence Vessels

The MCDV fleet uses a support strategy similar to that used by the Griffon helicopter. These ships were procured as commercial off the shelf (COTS), and are designed to operate in coastal waters, rather than in high threat warfare areas. They have very small military support crews who provide limited first-line maintenance. The

[25] Telephone conversation, Major Hobbs/LCol Rogers, DAEPM (TH) 4-6, 4 March 2002.

system contractor provides all maintenance support except for weapons and crypto that is provided from military second-line facilities. To provide deployed support, the contractor uses a deployed contractor team, or local companies, to do the work on their behalf. The ships have sufficient robustness (four engines, duplicate electronics, etc) that they are capable of returning to a secure location for maintenance in all but the most extraordinary circumstances.

This contract has proven to be cost effective for both DND and the maritime user. There is no requirement to maintain a large logistics chain and infrastructure. The commercial nature of the ships provides more options for component replacement as the ship can utilize components from a number of different maritime parts suppliers. The contract is considered to be very effective in supporting the MCDV class, although it must be recognized the MCDV class was never designed to be a warship that would be utilized in a high-risk military environment.[26]

3.4.5 Canadian Contractor Augmentation Program

The Canadian Contractor Augmentation Program (CANCAP) is a new project initiated to investigate the potential employment of contractors in support of operations, primarily overseas but potentially within Canada as well. The project has many similarities to the U.S. Army LOGCAP programme, and will take advantage of the

[26] Telecon Maj Hobbs/LCdr Vivian, DMCM 3, 25 March 2002. DMCM is responsible to provide support to the MCDV ships.

knowledge gained from the Y2K LOGCAS and Bosnian CSP contracts. The project intent is to enter into two contracts to separately cover planning and functional capabilities. This will allow the planning contractor to be incorporated into an operation at the very early stages when their expertise will be most beneficial. The functional contractor would then deliver the functional services the planning contractor had identified. In some cases, such as disaster relief in Canada, the functional capability would be engaged very early; in other cases such as operations outside Canada, the functional capability might not be engaged until later in the operation when the theatre had become more stable and secure.[27] In either case, the project documentation identifies use of the contract to be an augmentation capability that DND can employ to provide more flexibility in response to any operational scenario, and would be initiated on an incremental basis as appropriate.

CANCAP is foreseen to provide a number of advantages. It will provide DND with different support capabilities that can be activated when required, without having to maintain the full infrastructure within DND. In a few instances, such as well drilling or rock crushing, it could provide an additional capability that DND does not presently have. The project may help to develop some strategic support capabilities that do not presently exist in Canada. It will also provide DND with access to leading edge commercial technologies, without having to invest in them. Lastly, it will assist the military by either improving soldier Quality of Life (QOL) by decreasing the number of

[27] Barker 13.

deployments that support personnel will have to undergo, or by making a larger pool of support soldiers available for deployment to new operations where use of contractors is not yet appropriate. As envisioned, CANCAP will ensure that "under the right conditions, contractors can serve a valuable role as replacements for support personnel on deployed operations, whether at home or abroad."[28]

3.4.6 Supply Chain Project

The Supply Chain Project (SCP) is examining the possibility of utilizing a contractor to deliver supply services throughout much of the CF. If implemented, this project would have major implications to force structure, as it would significantly decrease the number of supply technicians in the CF. As the scope of the project has not yet been finalized, it will not be discussed within this paper. The project details can be found at the project website.[29]

3.5 United States

The U.S. Army has made, and continues to make, extensive use of contractor support in recent and ongoing operations. Specifically, it has taken advantage of its LOGCAP contract to provide support to both the Bosnia and East Timor operations. In both cases, the assessment is that LOGCAP has assisted the local commander in

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[28] Barker 14.

[29] The SCP website at http://www.dnd.ca/admmat/scp/data/keydoc_e.asp was accessed 19 Apr 02.

providing support services that his forces required, and were not available from within the available military force structure. The LOGCAP contract has been described as:

> a worldwide planning and services contract under which civilian contractors perform such logistics functions as engineering, supply, services, maintenance, transportation, construction and facilities management during both high-intensity warfare and operations other than war.[30]

The LOGCAP contract was partially initiated because a review of contract support to the U.S. forces during the Gulf War identified a need for theatre commanders to have access to pre-negotiated support contracts that could be invoked as necessary.[31] An initial LOGCAP contract was established in 1992 with the Brown & Root Services Corporation.[32] This contract was successfully tested on a large scale with the deployment of U.S. troops to Bosnia, where a political decision to limit the U.S. involvement to 25,000 troops had resulted in sever under-resourcing of support personnel.

> On 26 November 1995, the Brown & Root Services Corporation (BRSC) [LOGCAP] contract was activated to provide an intermediate staging base at Kaposvar and Taszar, Hungary. BRSC deployed about 1,000 employees to the region. The experience with a contractor work force in Bosnia has been good for the most part.[33]

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[30] David W. Reeve, "Contractors in British Logistics Support." Army Logistician Volume 33, Issue 3, (May-Jun 2001): 10.

[31] Ezell 17.

[32] Marilyn Harris, "LOGCAP: The Nation's Premier Contingency Contracting Program for Force XXI," U.S. Army War College, Carlisle Barracks, PA., 14 April 2000, 1.

[33] Garcia-Perez 41.

LOGCAP has become an integral and indispensable part of the Bosnia mission whose use has significantly reduced the requirement to deploy thousands of U.S. support soldiers to the Balkans.[34]

A similar situation existed in the East Timor operation, where the U.S. limited its participation to providing support that could not be provided by other coalition members. This support originally consisted in the provision of medium and heavy lift Marine helicopters based on a U.S. Navy ship, but military considerations dictated this arrangement be replaced by other arrangements as soon as possible. On 16 Oct 2000, LOGCAP was requested to provide a replacement capability. Following a 24-hour market survey, a contract was initiated and within days a base camp was under construction in preparation for the helicopters. The contracted helicopters (Mi-26's and Mi-8's contracted by Clintondale Aviation) ultimately flew 475 hours transporting 6,400 personnel and 845 tons of materiel. LOGCAP was also requested to provide life support to U.S. personnel assigned to the mission. This operation validated the ability of the LOGCAP contract to assist the U.S. in meeting its overseas commitments without using military resources.[35]

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[34] Darrel A. Williamson, "Contracted Logistics in Bosnia." Army Logistician Volume 30, Issue 3, (May-Jun 1998): 21.

[35] James Folk and Andy Smith, "A LOGCAP Success in East Timor," Army Logistician Volume 32, Issue 4, (Jul-Aug 2000): 38-42.

These operations indicate the use of contractors can be very successful if the conditions for their use are appropriate. In both, LOGCAP was able to replace a military capability that was not, or no longer, available. In the Bosnia case, the capability was not available right from the start; in the East Timor case, the contractor replaced a military capability that was required elsewhere. In both cases, the contractor was very accommodating, thereby allowing the in-location commander the flexibility needed in order to complete the mission. As stated by James E. Althouse:

> LOGCAP is a true force multiplier in that it uses already developed logistics contingency contracts to provide rapid and responsive support within a theatre. It can be used in joint, coalition or multinational missions, and overseas or stateside, if necessary.[36]

3.6 Summary

Nations continue to expand their use of contractors to support operations as militaries seek alternative support means. There are three major types of contractors, of which system and contingency contractors are primarily used to support operations. The potential use of contractors for operations covers the gamut of support services. Canada has used system contractors for a number of different platforms, and is considering them for others. Canada has also used the Bosnia CSP as a trial of contingency support for a specific operation, and is developing the CANCAP project as an in-place contingency contract that could support any operation.

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[36] Althouse 16.

CHAPTER 4 – REASONS FOR USING CONTRACTORS

4.1 Introduction

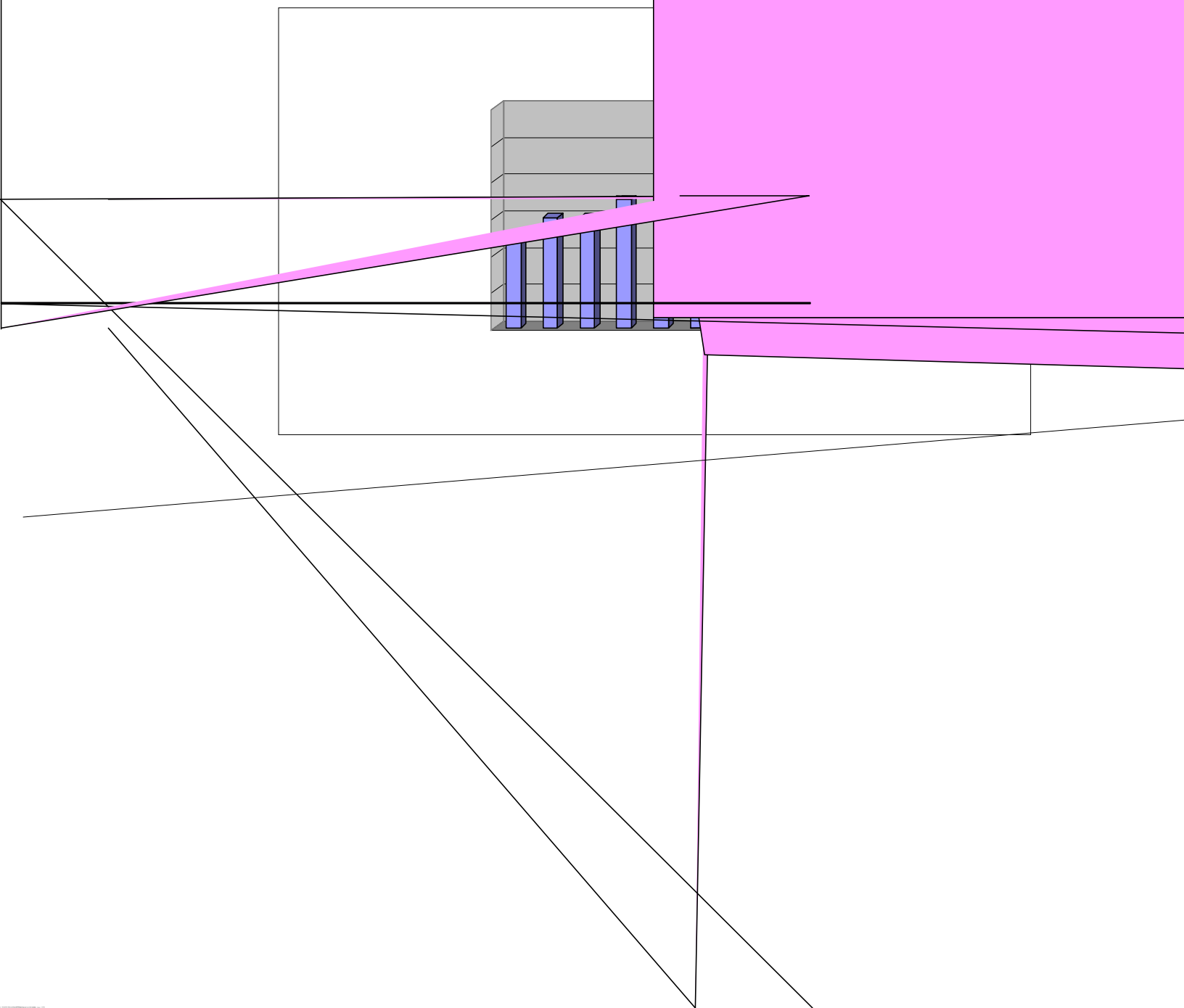
The primary reason that nations use battlefield contractors is to meet a requirement that cannot be provided through in-house military capabilities. This could be a result of the changing nature of warfare, political reasons, a lack of a specialized capability, to replace a military capability that is required elsewhere, to provide deployment relief, to save money, or to reduce force structure. Regardless of the reason, contractors can provide an alternative means for provision of a capability required within an operational theatre. Joe Fortner, a U.S. Army logistics management specialist, has identified that "lessons learned throughout our country's history, including those from our most recent military operations, demonstrates that contracting can be an effective force multiplier."[37]

4.2 Changing Nature of Operations

The nature and number of operations has changed significantly over the last decade. Operations have ranged from major conflicts such as the Gulf War and Kosovo Campaign, to those of limited threat or humanitarian assistance that occurred with the Turkish earthquake, the Ice Storm, or the Red River flooding. Current threat assessments

[37] Joe A. Fortner, "Institutionalizing Contractor Support on the Battlefield," Army Logistician Volume 32, Issue 4, (Jul-Aug 2000): 12.

indicate there is little likelihood for another ma
regional conflicts such as peacekeeping and p
operational focus. An indication of the level
has had a 300 percent increase in mission comm
they do not appear to be tapering off."[38] The
number of operations per year doubling or tripli



The frequency of deployments, coupled with increased expectations of QOL, means soldiers now expect to have reasonable accommodation and services when they are on extended deployments such as peacekeeping.[42] This has resulted in nations having to provide semi-permanent accommodation, instead of the traditional temporary tent accommodation that has been used in the past. Contractors are one means that nations can use to meet this expectation.

The distance at which conflicts are occurring has also increased dramatically. During the Cold War, movement primarily involved transportation from North America to Europe. Defensive plans leveraged this factor by forward-storing supplies and equipment, and creating detailed HNS arrangements that could be invoked as required. Today's conflicts occur worldwide, and frequently involve distances double those previously experienced. This lack of resolution of the future battle area prevents the establishment of forward stocking sites and HN arrangements. The result has been a substantial strain on existing military transportation systems, with many militaries turning to commercial contractors to provide some of their strategic lift shortfalls. The UK Strategic Defence Review identified expeditionary forces might have to move strategically up to 8,000 kilometres and 700 kilometres internally. This would require contractors to partially meet some of the transportation requirements.[43]

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[42] David M. Moore and Peter A. Antill, "British Army Logistics and Contractors on the Battlefield," Defence and International Security Volume 145, Number 5, (October 2000): 50.

[43] Reeve 10.

Unless militaries restructure their force capabilities to more closely match the requirements of today's 'expeditionary' style of conflict, nations will continue to require the use of contractors to provide both facilities and lift to deployed troops.

4.3 Political Reasons

Politics can result in the use of contractors for the provision of support services, instead of military forces. National politics, or those of the receiving nation, may place limits on the number of soldiers allowed into an operational area. Contractors, particularly in the service and support areas, offer a means to remain within troop ceilings but still provide the level of service required. The U.S. has successfully used this strategy for operations such as IFOR and SFOR where "political constraints have limited troop numbers in Bosnia, so support functions have been performed by contractors who were not counted against force totals."[44] In other cases, such as the provision of military support (Foreign Military Sales) to other governments, contractors may be used to provide system support to equipment, such as helicopters, in order to reduce the local perception of the number of visible foreign soldiers.

[44] Althouse 15.

4.4 Lack of a Specialized Capability

A primary reason for using contractors is to provide a specialized capability the military does not have internally. This lack of capability may exist for a number of reasons, including elements of cost, limited requirement, or non-core activity. The increasing complexity of weapon systems is also forcing the use of system contractors because the specialized training and equipment required to conduct maintenance and repairs is too expensive to maintain within the military. Staff in the UK have noted:

> By introducing more sophisticated technology into weapon systems, the Revolution in Military Affairs has ensured that system contractors will become increasingly essential to military operations.[45]

A second reason to use contractors to replace a specialized capability is the small number of specialized personnel or equipment required for the service does not justify the cost of maintaining that capability within a military infrastructure. Although specialized contractors may appear to be more expensive at first glance, when the total training and support costs to maintain a military capability are accounted for, contractors can be a more cost effective means of providing a specialized support capability.

> Contractors provide a source of high-tech, low-density skills. The Army is reaching the point where it can no longer afford to maintain the training infrastructure for military occupational specialities with a density of a few dozen soldiers.[46]

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[45] Reeve 10.

[46] Fortner, "Institutionalizing Contractor Support on the Battlefield" 14.

A third reason militaries do not maintain a specific capability is because it is not considered a 'core' activity they wish to develop or maintain within their military infrastructure. This is the case in Bosnia where the U.S. Army is using contractors for sewage disposal because it does not maintain this function within its force structure.[47]

Given the current and projected financial limitations, there is little doubt that militaries will continue to make, or expand, the use of contractors to provide specialist capabilities that are not cost effective to maintain within their infrastructure.

4.5 Replacement of a Military Capability

The use of contractors to replace a military capability has taken on increasing importance, particularly in lower threat environments such as peacekeeping or peacemaking. In these situations:

> The contracting of civilian firms to provide a broad range of logistic services can be viewed as a potential force multiplier, especially in peacekeeping and humanitarian situations in countries that have little infrastructure.[48]

Since the Gulf War, these types of missions have represented the vast majority that have been undertaken, and caution must be exercised not to learn the wrong lessons from this plethora of lower-level threat missions. By definition 'peace keeping' operations are

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[47] Fortner, "Institutionalizing Contractor Support on the Battlefield" 14.

[48] Reeve 11.

not as risky as war fighting, therefore not all peacekeeping lessons are applicable to war fighting. Contractors are not suitable to fully replace military capability in all scenarios, so care must be taken not to completely replace a military capability, without understanding the full battle space implications of that decision.

The use of contractors also provides a means of resolving imposed troop ceilings that may apply to a specific theatre for political or other reasons. This approach was used in Bosnia, where because of force ceilings "the US has given most support functions to contractors because they are not included in the total force figures."[49] This allowed the U.S. to deploy significantly higher levels of combat soldiers within the 25,000-manpower ceiling imposed by the U.S. Senate than would have been the case otherwise.

4.6 Deployment Relief

Using contractors to provide deployment relief to over-tasked support forces can result in several advantages. The most obvious one is over-tasked soldiers can stay at home for longer periods before they are required to deploy again.

> Contractors can reduce OPTEMPO [operational tempo] and its inherent burden on soldiers. Using contractors, particularly in relatively benign environments, reduces the need to send soldiers to perform the mission.[50]

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[49] Reeve 12.

[50] Fortner, "Institutionalizing Contractor Support on the Battlefield" 14.

Ideally, this means some support soldiers can stay at home, thereby improving their QOL. This is of particular importance to Canada, where many of the support personnel have already completed two or three deployments, often to the same theatre, over the last five years. As previously noted, the Bosnia CSP has saved the deployment of approximately 183 soldiers per six-month rotation since the contract was initiated in June 2000.

A strategic advantage of using contractors is the soldiers who have not deployed remain available for additional or higher priority tasking. This is not an advantage to the individual soldier in terms of their OPTEMPO, or QOL, but it does provide the military with more flexibility in terms of meeting national operational tempo.

> Such a contracting out of services would offer flexibility, help with surge capacity and also release those assets, in *rouelment* [scheduled rotation of troops], that are still army owned to be available for additional operations that may come along in the mean time.[51]

As previously mentioned in Section 3.5, this approach was used by the U.S. for replacing its contribution to the forces in East Timor, where the LOGCAP contract clearly "gained favor as a means of supporting US forces."[52]

A third advantage of using contractors is they may assist in the reduction of the military deployment requirement. This can happen by two different mechanisms; firstly

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[51] Moore 49.

[52] Mattox 31, 33, 35.

by the contractor using in-theatre local capability that does not require deployment, or secondly by the contractor deploying using non-military commercial means. In either case, the military saves time and effort by not directly supporting the contractor deployment.

4.7 Economics

Contractors can offer substantial economical advantages over the use of military personnel in certain circumstances, particularly when the contractor is offering a capability that is not 'core' to military activity. James Althouse noted that U.S. studies indicate, "often the cost of training [U.S.] troops to perform a task exceeds the cost of contracting with someone who already performs that task on a routine basis."[53] The UK experience in Bosnia supports this view, as "the awarding of the [UK Bosnia] food contract to Brookers Food Services alone saved £560,000 the first year, and further savings of almost £2 million are projected."[54]

The continuing pressure on military budgets means any process that potentially saves money will be examined and probably invoked. The result is "continued budgetary pressure will force the military to outsource all non-core business to industry and consider more imaginative ways of reducing overheads."[55] Militaries will continue to

[53] Althouse 15.

[54] Reeve 11.

[55] Moore 50.

examine alternatives such as contractor partnering that may result in "providing the warfighter with increased ability at a lower cost to the taxpayer."[56]

Several authors have cautioned the perceived savings from contractors may not be as great as originally foreseen. In particular, the U.S. has found contractors can be expensive, and "there still are no empirical data to prove or disprove [the] assertion"[57] that contractors save money. Additionally, most authors have highlighted the issue of 'core capabilities,' noting the necessity to ensure "the military must retain the essential core logistics capabilities and avoid the temptation to use contractor logistics support as widespread and cheap replacements."[58]

4.8 Downsizing

During the last decade, there has been a significant downsizing of western military forces because of 'peace dividend' expectations at the end of the Cold War and budget considerations. As noted in Section 1.1, the CF has downsized by approximately 25 percent since 1990. The UK forces have experienced similar reductions with budget cuts of some 23 percent and personnel cuts of one third.[59] The U.S. Army has not been spared

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[56] Williams 34.

[57] Orsini 130.

[58] Reeve 13.

[59] Moore 47.

either, with reductions in manpower of some 300,000 occurring at the same time that operational deployments increased significantly.[60]

In order to maintain combat capability in the face of these substantial cuts, militaries often cut their support capabilities in order to retain more combat capability in the force structure. This has lead to the situation where "as the Army's force structure continues to shrink and the demand for force projection and sustainment rises, the use of third-party logistics companies will only grow."[61] The use of contractors is seen as one way of replacing, on a required basis, some of the support capability has disappeared as part of downsizing activity.

4.9 Summary

Use of contractors to support operations is becoming more widespread for very valid reasons. Contractor support can help to offset smaller force structures, provide services in specialized or low volume activities, replace capability required elsewhere, provide deployment relief, reduce selected costs, aid new deployments or assist with national political agendas. It must be recognized that in addition to the advantages of

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[60] The U.S. active-duty force structure dropped from 789,000 in 1989 to 480,000 in 2000. Yet the operating tempo (OPTEMPO) continued to rise with soldiers across the Active Army being deployed on average more than 130 days in 1999. Fortner, "Institutionalizing Contractor Support on the Battlefield" 14.

[61] Sylverster H.Brown, "Using Third-Party Logistics Companies," Army Logistician Volume 31, Issue 6, (Nov-Dec 1999): 18.

using contractors, there are also a significant number of implications and concerns that must be assessed if operational success is to be maintained. These will be discussed in the next Chapter of this paper.

CHAPTER 5 – FACTORS WHICH INFLUENCE USE OF CONTRACTORS

5.1 Introduction

Although many authors have identified advantages to the use of contractors, the same authors have also identified a significant number of factors that need to be considered if contractors are going to be comprehensively used in an operational theatre. These factors include the general principles behind the use of contractors, potential risks to the operation, threats to the contractor, contractor availability, contractor reaction time, legal implications, costs, and command and control of contractors. Each of these factors must be considered in light of the current and potential operational situation in any decision to employ contractors on operations.

5.2 Principles

The U.S. Army, which arguably has the greatest experience with using contractors, has identified a number of institutional principles to be considered in the decision to utilize contractors. These principles provide broad doctrinal guidelines designed to ensure that maximum benefit and minimum risks are incurred. Joe Fortner, who works in the U.S. Army's Doctrinal Branch, has written:

> Using contractors to provide support and services to military operations is not without risks or costs. Institutionalizing their use in doctrine therefore must be based on certain governing principles [that] provide functional parameters within which to evaluate the desirability of using contracted support in military operations.[62]

In addition to identifying the need for contractor employment principles, he has also identified ten basic principles that should be followed if contractor use is to be successfully incorporated into military operations. These principles are:

a. Contractors do not replace force structure. They augment Army capabilities.
b. Contractors may deploy throughout the area of operations, [within limitations].
c. Commanders are legally responsible for protecting contractors.
d. Contractors must have enough [trained] employees.
e. Contracted support must be integrated into the overall support plan.
f. Contingency plans must [have alternatives] if a contractor fails to perform.
g. Contractor-provided services should be invisible to the users.
h. The Army must be capable of providing critical support before contractors arrive.
i. Within a given operation, using contractors could decrease flexibility.
j. Shifting operational requirements may require contract modifications.[63]

Cdr Addison, in his paper about battlefield contractors, has also recommended a similar set of principles for inclusion into CF contractor doctrine.[64]

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[62] Fortner, "Institutionalizing Contractor Support on the Battlefield" 13.

[63] Fortner, "Institutionalizing Contractor Support on the Battlefield" 13.

[64] Tim Addison, "Contractors on the Battlefield – Have We Done Our Homework?," AMSC 4 paper, Canadian Forces College, Toronto, 2001, 26-30.

Contractors are not subject to the same conditions of service as soldiers, so alternative arrangements to replace them with military personnel must be available. Consequently, militaries must maintain an available minimum 'core' capability that can be utilized should the contractor be unable to deliver the services. This 'core capability' needs to be defined for each mission in terms of functional capability, qualitative capacity and operational impact.[65] Canada recognised this principle in the Bosnia CSP by retaining 88 soldiers embedded within the contractor's organization and designating additional soldiers in Canada as 'backup and deployable' should the contractor be unable to meet his commitments.

5.3 The Risks Of Using Contractors

The majority of the authors reviewed recognized that despite the advantages of employing contractors, there are numerous risks that needa

case scenario.[66] This scenario is perhaps too pessimistic, as all operations should have alternative options to mitigate total failure solely because of contractor failure. A more appropriate statement would appear to be that of David Moore and Peter Antill, who state, "risks increase in that industry may fail to meet its obligation, although this may not happen in reality."[67] In either event, not only the degree of risk must be considered, but also the impact of the risk. This dynamic can range from a low risk with low impact through to a high risk with high impact.

There are a number of corporate doctrinal issues that require addressing if militaries are to ensure that operations will not be adversely effected. These must commence with an up-front assessment that examines all the risk issues to the mission.

> Commanders must conduct risk assessments to determine if contractor support is suitable. The risk assessment should cover the situation, location, potential for hostilities, risk to mission accomplishment, risk to contractor personnel, and cost of the contract during peacetime and wartime.[68]

In addition to the risks applicable to a particular mission, there is also a requirement to understand the implications of using contractors as logistics services shift towards distribution-based systems rather than today's stock based system. This is particularly so where system contractors are being considered to deliver support services for particular weapons or fleets, because contractor use could reduce the integral military structure

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[66] Reeve 12.

[67] Moore 50.

[68] Garcia-Perez 42.

capability to the point where "there will be no force structure backup or military stockpiles or repair parts."[69]

Above the obvious reduction in military capability for that specific functional capability, there is also the potential for a longer-term reduction in the overall capability of military staffs. As militaries no longer remain responsible for the delivery of a specific capability, they will lose their present capacity to manage that function. This could result in a situation where "senior logisticians in the future will have significant shortfalls in their professional development,"[70] and lower ranks will lose their core functional expertise and skills.[71] Obviously, any programme that could have such a serious impact on the maintenance of military capability would have to be examined very carefully to ensure that future operational capability is not reduced to an unacceptable level.

There is also an economic requirement to ensure use of system contractors is fully addressed institutionally, before they are actually required for the first time on operations. It is much easier, and cheaper, to have negotiated contractor responsibilities before they are required, than when they are actually required in a crisis.[72]

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[69] Orsini 131.

[70] Orsini 131.

[71] Reeve 13.

[72] David L. Young, "Planning: The Key to Contractors on the Battlefield." Army Logistician Volume 31, Issue 3, (May-Jun 1999): 11.

Contractor use raises two communications security issues that can potentially affect mission success. The first is contractors, particularly system contractors, bring into theatre a plethora of their own unique systems, which may overload an already stressed theatre communications infrastructure. The second is many contractors use commercial communications systems that do not have the same security robustness as military systems, thereby making them more susceptible to interception or sabotage.[73] These communications concerns must be addressed, as they could significantly impact on operation security and success.

The necessity to maintain their legal status within the Geneva Convention means contractor personnel normally will not be armed and therefore are unable to protect themselves in a threat environment. This creates a vulnerability that can be exploited, particularly for high value or attractive cargoes such as ammunition, or bulk fuel, the loss of which could have significant operational impact. This vulnerability also applies to HN assistance that may be easier for an enemy to infiltrate than attempting to infiltrate national military organizations.[74]

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[73] Brown 22.

[74] Brown 22.

In order to negate this vulnerability, the operational commander must provide security through the use of military escort forces, or else to use military assets that can defend themselves. In either case, the commanders' flexibility has been reduced, and any potential manpower savings gained through contractor use will be reduced by the requirement for a military backfill. In recognition of the security threat, Sylvester Brown has recommended, "third-party logistics companies should not be employed in areas of a high risk."[75] The UK has also recognized that contractor use limits the firepower available for security. Instead of having support soldiers who are capable of defending themselves and assisting in Rear Area security tasks, the commander will have to use some of his soldiers to defend contractor personnel who are incapable of these tasks. This situation "occurred in Somalia where U.S. soldiers and marines were required to escort all contractors."[76] The security issue is becoming of greater importance as asymmetric threats create increased risk within the Rear Area.

5.4 Threats to Contractors

In addition to the risks to the mission, there are also risks to contractor personnel. Contractors are not soldiers; therefore they cannot be exposed to the same threats and risks as soldiers. There are both moral and legal requirements for DND to provide a reasonably safe and secure working environment to contractors. This creates a number of

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[75] Brown 22.

[76] Reeve 13.

issues for DND, including the requirement to provide protection and security training, as well as meet minimum expectations in terms of the services available to contractor staff.

One of the major concerns expressed by opponents to using contractors is the contractor's ability to work in high threat (risk) areas. This concern has been expressed by a number of authors including Garcia-Perez:

> Although contractor personnel have historically been willing to go into a war zone to work and have proven to be reliable, there is still no assurance that essential civilians hired to serve in peacetime would be willing to remain in a potential war zone should a conflict actually start.[77]

and Orsini and Bublitz:

> The issue facing us is not whether large defense contractors will continue to service contracts, but whether or not they will be able to keep their employees on the battlefield when and where needed.[78]

The actual response by contractors is difficult to quantify in absolute terms because parameters change for each circumstance. Certainly, there are situations where the use of contractors is inappropriate, but historically contractors have been used during all of the major operations of the last half-century including Bosnia, the Gulf, Falklands, Vietnam, and Korea. What is certain is the DND responsibility to be aware of the security issues, to provide appropriate protection, and to ensure that contract personnel are aware of the risks. Any use of contractors requires the contractor staff to be fully aware of the full

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[77] Garcia-Perez 42.

[78] Orsini 131.

circumstances and implications of that employment. This must include the living conditions and potential security risks, including the possible use of nuclear, chemical or biological (NBC) weapons. Ultimately DND, as the employing agency, bears some of the responsibility for contractor safety, so it must ensure that there is a clear delineation of the security duties and responsibilities of DND, the contractor and the contractor employees.[79]

A growing concern in today's asymmetric threat environment is the potential use of NBC weapons. These weapons are non-discriminatory; they are as effective on contractors as they are on soldiers. Operations in this type of environment would require the CF to provide training and personnel protective equipment to any contractor personnel who will potentially be exposed to that environment. These are additional costs in terms of training, equipment and time that must be considered in any decision to utilize contractors in this type of high-risk environment.

5.5 The Availability of Contractors

The availability of contractors is a complex subject that is tied to a number of diverse issues. In the civilian sector, there is an increasing use of third-party contractors to provide services that are not 'core' to businesses, and in theory DND can also utilize

[79] Althouse 16.

this capability to provide services it requires as well. Within the U.S., there are more than 500 third-party logistics companies with more becoming available each year.[80]

In reality, there appears to be fewer companies that are available to the military than to civilian industry. Brown's study of U.S. companies interested in providing third-party logistics support into potentially hostile deployment areas determined:

> Only 15.4 percent of the companies said yes. Another 15.4 percent said they were interested in the proposition, 30.8 percent said they were not sure of their response and 38.5 percent said no, they definitely were not interested. Most third-party logistics companies do not operate overseas, or they do not wish to risk any hostilities.[81]

To some degree, the results of this study were also reflected in Canada, based on DND's experience with the Bosnia CSP. Although there was a reasonable degree of initial interest from industry, when the final bids were reviewed only three companies had submitted proposals, and only one was found to be compliant. It must be noted however, that was the first attempt at this type of contract and future initiatives such as CANCAP may solicit greater interest.

A secondary issue is the state of the economy. When times are tough, companies are more willing to take greater risks in order to maintain or increase their business capacity. When the economy is better, that same company may no longer be interested in

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[80] Brown 19.

[81] Brown 20.

military business if they have sufficient other business. This could lead to the situation where a company has supported DND in one year, but does not in a following year because of a change in the economy or business practices.

5.6 Contractor Response and Reaction Times

The ability to use a contractor is directly related to the speed they can deploy into a theatre of operations. The contractor's ability to deploy is tied to a number of interrelated issues including the threat scenario, contractor readiness and transportation availability.

Issues regarding the threat scenario have been discussed in Sections 4.3 and 4.4. There remains considerable debate within the literature as to the appropriate time in which contractors should deploy. The most conservative authors indicate "there are considerable limitations on the timeframe for deploying contractors. The U.S. view is that contractors should not arrive until hostilities have ceased."[82] This would appear to limit the use of contractors for any operations, other than those with a very limited threat profile. This limitation creates doubts about any decision to adopt use of system contractors, because they are the sole source of support for systems that will have to be used in theatres where hostilities exist.

[82] Reeve 13.

A more liberal view acknowledges use of contractors may be limited at the start of hostilities, but they will arrive in theatre as soon as practicable.

> Planners must weigh the likelihood that contractors will not be allowed (or will not be able) to enter the theatre at the start of a major operation. The military forces may be required to be self-supporting for a period of time. It should be noted, however, that the LOGCAP contractor entered Somalia, Rwanda, Haiti, and Bosnia only days after the first U.S. troops deployed.[83]

This viewpoint appears closer to recent reality, as contractors have entered operational areas right from the start, and system support has been available close to hostilities. Acknowledging this contractor limitation requires militaries to either maintain a core capability to be used at the start of operations, or to develop alternative support strategies such as component replacement rather than repair, with the repairable part being transported to a safer location.

In the development of a contractor support capability such as LOGCAP or CANCAP, there is a requirement for the military to ensure any potential contractor is actually capable of service delivery in the timeframe specified. This type of 'readiness' verification is conducted on a regular basis for military units as part of their training cycle. A similar verification requirement exists for contractors if the military is to remain confident of the availability of contracted support. The U.S. has acknowledged this obligation and has determined that "contractor support must be tested and evaluated in ongoing operations and training events on a continual basis, and contractors must

[83] Young 11.

undergo the same rigorous scrutiny by Congress and senior military leaders that our military faces daily."[84]

In addition to being ready to deploy, contractors have to actually deploy into theatre if they are to execute their function. Their movement can be conducted by two different methods. The preferred method is making the contractor responsible for his own transportation, but in some situations the military may have to provide transportation in order to get the contractor resources into theatre. In the latter case, and frequently in the former case, there will be a requirement for the contractor to become part of the theatre movement plan, with the movement priority assigned by the operational commander. This necessitates the military and contractor staffs maintain an early and continuous planning relationship to ensure each understands the requirements of the other. Contractors will need to undergo the same overseas preparation, movement, reception, and integration issues as soldiers, as there is no advantage in having a contractor capability if it cannot deploy when required.[85] Regardless of whether contractors move themselves or use military transport, there remains the requirement to ensure their arrival in the theatre has been co-ordinated. Many theatres will have very limited infrastructure, resulting in over demand for the infrastructure that is available, and

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[84] Orsini 130.

[85] Joe A. Fortner, "Managing, Deploying, Sustaining and Protecting Contractors on the Battlefield," Army Logistician Volume 32, Issue 5, (Sep-Oct 2000): 5.

the requirement to establish priorities and allocate resources.[86] This again necessitates that any conflicts between the contractor and the military requirements have been addressed at an appropriate level and priorities established that are acceptable to all.

5.7 Legal Issues

There are a number of significant legal issues that arise from the employment of contractors in operational zones. These cover the range of employing non-combatants in a combat zone, to entitlements and protections under local, national and international law such as the Law of Armed Conflict, and special arrangements, such as Status of Forces Agreements (SOFAs), which may have been arranged.

5.7.1 Geneva Convention

International understanding and the Law of Armed Conflict are based on the Geneva and Hague Conventions. As such, "provisions of the Hague and Geneva Conventions and other applicable international laws do not consider contractor personnel as combatants,"[87] but they are also not civilians either. Contractors fall within a special group called "civilians authorized to accompany the force."[88] This status provides them some of the protections afforded to military, and some afforded to civilians, but also places limitations on them. Contractors cannot be used for activities that would place

[86] Young 12.

[87] Garcia-Perez 43.

them in potential contact with the enemy, such as participating in an attack or being used to defend an area, nor can they be used to perform functions such as operating equipment that is used directly against an enemy. As long as contractors do not violate these principles, they are entitled to legal status as a prisoner of war should they be captured.[89] Unfortunately as contractors, particularly system contractors, become tied ever closer to battlefield functions like weapon systems repair, maintaining the legal status for contractors without crossing a distinct legal line will become increasingly difficult.

Contractors cannot be deliberately targeted, but this does not prevent the targeting of their support function or location, a situation that places them at direct risk. It will remain "the armed service's job to protect them, and the commander of the unit to which the contractors are assigned is legally responsible to provide that protection."[90] Expanded use of system contractors for activities such as unmanned aircraft (UAVs), weapons, or ship repair, will increasingly put contractor staff into 'grey' areas where their exact status is unclear. This will increase the risk to them, and the need for DND to provide an appropriate level of protection.

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[88] Fortner, "Managing, Deploying, Sustaining and Protecting Contractors on the Battlefield"6.

[89] Fortner, "Managing, Deploying, Sustaining and Protecting Contractors on the Battlefield" 6.

[90] Althouse 17.

5.7.2 Status Of Forces Agreements

It has become common practice for military forces to negotiate SOFAs when operating within the territorial boundaries of sovereign nations. The SOFA details the status of the military force to the sovereign nation, and usually contains arrangements that provide special legal protection and economic savings, such as limiting legal liabilities or removing the requirement to pay customs and taxes. The status of military members is clear in SOFAs, but the status of contractors is often less clear. This can lead to situations that become sources of dispute.

The U.S. experience with Hungary at the commencement of the Bosnia operation demonstrated some of the difficulties that can be experienced with application of SOFA arrangements to contractors. The problems commenced from the start when the military negotiating team did not include the contractor in the SOFA negotiations. The result was "because there was no formal agreement, the contractor had difficulty gaining permission to bring outside labor into Hungary."[91] There were other difficulties in determining what was a legitimate military expense covered under the SOFA, and what was a contractor expense not covered by the SOFA. Ultimately, the U.S. Government claimed from the Hungarian Government over $18 million of improperly collected taxes that the LOGCAP contractor had been forced to pay.[92]

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[91] Young 11.

[92] Young 11.

A second implication in not including the contractor within the SOFA negotiations was to reduce the contractors' ability to deliver the contracted services. This can affect both the scope of the services and the cost to deliver those services.

> Additional challenges included requirements to obtain permits for everything from minor new construction to operating washracks. In summary, the contractor was not permitted to operate with the same freedom as a U.S. military unit would have been and was left on his own to negotiate many issues with the host nation government.[93]

The decision to not include the contractor in the Hungarian SOFA negotiations resulted in the U.S. having to spend considerable time, effort, and money in order to take full advantage of the services the contractor had agreed to provide. Had the initial negotiations addressed the issue of contract support "up front," many of the problems experienced would not have occurred.

5.7.3 Contractual Issues

Whenever a contract is created, there are a number of contractual issues to be considered and resolved, and battlefield contractors are not excluded from this requirement. Amongst the contractual issues that need to be addressed are accountability, contract performance, use of sub-contractors, and implied and stated issues.

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[93] Young 11.

A fundamental aspect of the Canadian military ethos is accountability, but this is not necessarily so to the same degree with contractors. This can create the situation where "accountability is necessary in everything the Army does, but some contracted employees feel they are only accountable to their firms and bypass the military system."[94] The resulting condition could be one where the military looses accountability control, or where it is no longer being capable of providing full accountability to the government.

There is an obvious requirement to ensure the goods and services contracted for are actually provided, and then in fairness, subsequently paid for. Canada utilizes PWGSC, on behalf of DND, to administer and ensure compliance of large Canadian military contracts. Direct oversight of the contractor is therefore provided by PWGSC, although DND must certify that services have been provided before payment is made. This government mandated system introduces a third party into the contract process, a situation that can unfortunately lead to misunderstandings, alternative interpretations, and the perception the user has little direct control over the contractor.

There is also a requirement to ensure subcontractors used by the prime contractor are in compliance with all the requirements demanded of the prime. This is particularly true for military contractors, who often have to meet special security, training, availability, or bonding requirements. The subcontractor compliance

[94] Althouse 16.

requirement should remain the responsibility of the prime contractor, but DND also has a responsibility to ensure this requirement has been established. Failure to do so could result in significant security violations.

No matter how well a contract is written, there will always be a number of stated and implied tasks that affect both the contractor and the military. A good example of this is in the area of contractor protection where:

> The Government's responsibility for providing force protection to contractors derives from three factors: a legal responsibility to provide a safe workplace, a contractual responsibility that is stipulated in most contracts, and a practical responsibility to help contractors to do their job.[95]

As noted, there are both stated protection tasks and implied contractual protection tasks. It is only through providing a realistic level of contractor protection that the contractor will be able to actually do his job; therefore it is in the military's best interest to provide the appropriate level of security required, regardless of the stated requirement within the contract. Other issues with similar stated and implied tasks fall in the areas of work safety, use and disposal of hazardous materials, and Canadian standards versus in-theatre standards.

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[95] Young 11.

The use of contractors on operations raises a significant number of legal issues that are not applicable when military personnel are used. These issues need to be addressed as part of the decision to use battlefield contractors.

5.8 The Economic Costs of Using Contractors

Many of the advocates for implementation of contractor support cite cost savings as one of the significant benefits to be achieved. Their logic is based on the argument that contractors are inherently more efficient because they can focus on specific 'core' activities and deliver services that are only utilized when actually required. Accordingly, DND will not need to maintain those services in the military infrastructure and thus will only have to pay for them when required. The validity of this argument has not necessarily been proven; in fact a number of authors have cautioned that there are numerous secondary costs associated with the use of contractors that are not reflected in the contract price. What does remain valid is that for a price, contractors can provide DND with additional or alternative support capabilities not available within the force structure.

The U.S. experience with LOGCAP has been very successful, but not necessarily cost effective. LOGCAP is a cost-plus contract "which means the contractor is reimbursed for reasonable costs plus an award or performance fee."[96] Accordingly, there

[96] Williamson 21.

is little incentive for the contractor to achieve maximum economy because they are paid actual costs plus a percentage. It could even be argued that contractors will use the most expensive solution, as this would maximize their final return. A U.S. General Accounting Office (GAO) audit review of the U.S. Army experience in Bosnia resulted in the "GAO [expressing] serious concerns about the Army's ability to control and report [LOGCAP] costs effectively."[97] In fact, the U.S. Army spent $461.5 million, $111 million more than estimated for the 1997 Bosnia LOGCAP contract:[98]

In addition to the actual contract costs, the U.S. experience has identified a number of additional costs that must be considered when looking at the overall economic advantages of using contractors. Several of these are related to contract oversight and the provision of life support to contract personnel. James Althouse has noted, "some type of surveillance program must be put in place to monitor the contractor's performance."[99] Implementation of this obvious requirement will require some level of staff augmentation by personnel who have had special training in contract management.

A much larger cost is that of providing life support services to contractor staff. These services can be designated the responsibility of the contractor, or can be provided

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[97] Young 13.

[98] Reeve 12.

[99] Althouse 16.

by the military. From a strategic perspective, it is often cheaper for the government to provide these services than to pay for them through the contractor.[100] However, with large numbers of contractors, the provision of life support may create a situation where support to the contractors could overwhelm the military's capability to provide, thereby negating the reasons to use contractors in the first place.

5.9 Operational Planning Implications

The use of contractors increases the complexity of the planning process for any operation. Regardless of why they are being used, there is an absolute necessity to ensure that contractors are brought into the planning process early, and their requirements are considered in conjunction with the military requirements. Experience has shown:

> the key to any success in using contractors on the battlefield is their involvement in contingency planning. This is absolutely fundamental to the success of contracted support [101]

Their use can be made even more effective by involving them in pre-deployment exercises to ensure that all participants are aware of their responsibilities and capabilities before the actual deployment.[102]

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[100] Young 12.

[101] Moore 50.

[102] Williamson 23.

The successful incorporation of contractors into the theatre support plan will require the full attention of both the military and the contractor staffs to ensure that all factors have been considered. This will require the development of a co-ordinated contractor support plan, a function that is relatively new to military operations staff, and one that has not necessarily been done well in the past. Failure to conduct this part of mission planning often "has impacts on the execution phase of an operation or exercise."[103]

Included in the contractor support plan is the requirement for the commander to "consider and anticipate the support requirements of contractor personnel,"[104] as well as "additional [contractor] security requirements in their planning process."[105] There is an absolute requirement for planners to remember, "that force protection must be part of the deliberate plan and include the flexibility to respond to a situation as it develops."[106]

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in-place capability that does not have to be deployed,"[107] planners "must be prepared to conduct parallel contingency planning in the event a contractor does not perform or refuses to perform in a hostile environment."[108]

5.10 The Need for Doctrine and Training

Implementation of any complicated process such as battlefield contractors will have fundamental implications in the area of force structure and training. There is a definite requirement to develop the appropriate doctrine and training if this alternative way of doing business is to proceed smoothly and effectively. As early as 1998, the U.S. Army had recognized that "current doctrine that addresses the contractor presence has not kept pace with recent developments and the conditions under which the army deploys."[109] They had also realised:

> Contractor support will continue to be an integral part of the Army's sustainment strategy, and it is important we think through how we will integrate such support on future battlefields.[110]

It became apparent the U.S. Army did not have the mechanisms in place to effectively supervise and employ contractors, so to resolve the situation they proceeded

[107] Fortner, "Managing, Deploying, Sustaining and Protecting Contractors on the Battlefield" 4.

[108] Garcia-Perez 43.

[109] Althouse 17.

[110] Williams 35.

to develop the necessary doctrine and institutionalise it into their force structure.[111] The result of this process was the development of several contracting doctrine publications,[112] a program manager was established for LOGCAP co-ordination within the Army Materiel Command, and a special reserve unit dedicated to providing contracting support was also established.[113]

The UK has also recognized the requirement for contractor doctrine and recently stated, "clear CONDO [Contractors on Deployed Operations] doctrine is fundamental to using contractors if seamless and lean logistics with effective command and control is to be achieved."[114] Their ongoing CONDO project is examining many of the same issues the U.S. has addressed, and will be making recommendations with regards to developing and implementing contractor doctrine in the UK.

In addition to developing doctrine, there is also a requirement to ensure its implementation within the training system. There is little sense in having procedures if staffs are not aware, and use, them. The U.S. also recognized this problem and has begun

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[111] Fortner, "Institutionalizing Contractor Support on the Battlefield" 12.

[112] U.S. Army publications FM 100-21 Contractors on the Battlefield and FM 100-10-2 Contracting Support on the Battlefield.

[113] Ezell 17.

[114] Reeve 3.

to make changes in their training system to ensure all junior leaders become aware of the benefits and limitations of contractors.

> The emphasis now must be on the training of our future leaders. "Civilian contracting as a force multiplier" should be added to the Army's professional development program. Junior leaders must become familiar with the advantages and limitations of deploying system and contingency contractors.[115]

Canada has not yet developed a contractor doctrine despite the contractor initiatives already put into place, and others being contemplated. Our doctrinal manuals have not been updated, nor have we addressed the training issues required to ensure our personnel can competently utilize any provided contractor resources. There is a definite need to initiate action in these areas if the CF is to effectively utilize contractors on operations.

5.11 Command and Control of Contractors

Command and control are integral functions within the military, but the use of contractors brings a new dimension to this issue. Military commanders do not command contractors in a military sense, but rather exercise control through management of the contractor and the contract, thus making control a complicated task. The relatively simple military procedure of giving a military order to initiate change is replaced by a far more complex mechanism that requires the commander to work with the contractor's supervisory staff and/or amend the contract. Thus, the commander no longer exercises direct control, but rather must establish control through indirect means such as using the

[115] Garcia-Perez 43.

terms within the contract and negotiating agreements or specific guidelines and rules. This can become a lengthy and difficult process. Related to this issue is one of visibility. In order to provide command and control, it is necessary for the commander to know what is happening. To be effective, "commanders must maintain situational awareness of contractor personnel, equipment, and operations,"[116] just as they must have visibility of their military forces. Achieving this level of visibility will be a challenge for both the contractor and the military, but is vital to a successful operation.

The commander must also address the issue of being responsible for contractor staff in a theatre without actually 'owning' them. Placing contractor staff under the authority of the National Defence Act (NDA) raises significant legal issues with regards to the contractor's legal status, and might result in contract staff being considered soldiers. If they are not placed under the provisions of the NDA, then the commander is severely limited in his ability to impose a common discipline standard throughout the theatre. It also raises significant questions about the contractor's legal status with regards to foreign governments and SOFA agreements as previously discussed. Although none of these issues are insurmountable, "civilian contractors can cause disciplinary problems in the AO [Area of Operations],"[117] and significantly distract the attention of the

[116] Fortner, "Managing, Deploying, Sustaining and Protecting Contractors on the Battlefield" 4.

[117] Garcia-Perez 42.

commander from other operational issues. It is only "in extreme cases, that the commander can direct removal of an employee from the area of operations."[118]

5.12 Provision of Military Support

The theory behind using contractors is they provide support to the military, but depending upon the contract and the operational situation, the reality may become the military supports the contractor. This support could start as early as the deployment, where the military may be required to provide the contractor staff with specialized training or support, such as medical, mines, theatre situational expertise, or military equipment. "There are costs and administrative procedures associated with the POR/POM [preparation for overseas replacement/movement] process that must be planned into the deployment process."[119] The assistance demands could then extend through the entire deployment Reception, Staging, Onward movement and Integration (RSOI) phases with contractors requiring use of military transportation, disembarkation facilities such as ports and unloading facilities, theatre reception centres, and bed down facilities. These demands, which could be extensive, would primarily be required during initial deployments into limited infrastructure theatres. This is the exact scenario in which the military would also have the most demand for these activities, thereby creating a more complex situation where the military must establish additional priorities and co-

[118] Fortner, "Managing, Deploying, Sustaining and Protecting Contractors on the Battlefield" 4.

[119] Fortner, "Managing, Deploying, Sustaining and Protecting Contractors on the Battlefield" 5.

ordinate with a second organization. As the theatre matures and civilian infrastructure becomes available, there will be fewer requirements for contractors to use the military capabilities.

Once in theatre, contractors require access to life support, equipment and facilities. Either the contractor or the military could provide this; the decision will depend upon the circumstances of the contract and theatre, but it is usually best if DND provides the support for several reasons. Both will require life support, so provision of this requirement from one source provides economies of effort, removes competition between the two organizations for access to the same facilities, and imposes a common standard. Accordingly, "commanders must include contractor needs when considering the unit's life support, security, and mission requirements."[120] The major exception to DND providing this service would be the case where the contractor's deployment is of such size the military would be incapable of providing the required services. This factor could have particular concern with the provision of specialized services such as healthcare.

The provision of equipment is more complicated. Some military equipment is unique and must be provided to the contractor. Other applications, such as kitchens, can use commercial equipment that could be provided by either organization. Again, it is usually cheaper for DND to provide equipment because contractor overhead and profit do

[120] Garcia-Perez 42.

not have to be considered, unlike the case where the contractor procures the goods. The counter to this argument is the contractor may maintain the equipment better if he has paid for it. This decision will ultimately be made as part of the planning process for the design of the theatre support structure.

Regardless of whether DND or the contractor provides the support, DND will ultimately end up paying for the service. Contractors do not work for free, they want to recover their costs and make a profit as well. Use of contractors has inherent costs that DND must recognise as being substantial. In addition to any resources provided and the contract cost, the use of contractors adds planning and co-ordination costs that are in addition to those of a strictly military operation.

5.13 Others Issues to Consider

In addition to those issues previously discussed, morale and flexibility need to be considered when considering use of contractors on the battlefield.

Soldiers traditionally have been prepared to accept operations in severe conditions as long as they believe they are all suffering under relatively similar conditions. The use of contractors raises two issues; will contractor staff work in conditions that are lower in standard than they expect, and will soldiers remain content if they see contractor staff given a different (higher) standard than theirs? These issues affect the morale of both the soldier and the contractor, and ultimately operational capability. The theatre commander

must therefore remain aware of the morale issues and address them before they impact on operations. As noted by the British:

> The armed forces must not underestimate the effect on morale and discipline if their personnel see contractors responding to different codes of conduct and enjoying a better QOL in a theatre of operations.[121]

By their very nature, military organizations are designed to be flexible and responsive to the demands and requirements of the commander. This is not necessarily the case for contractors, who ultimately must make a profit on their investment. Accordingly, contractors will be very reluctant to make any adjustment to their Statement Of Work (SOW) until they have reviewed the implications to determine the effect on the 'bottom line'.[122]

Any requirement to rewrite the SOW creates three issues for the commander. The first is the time delay in rewriting the SOW before any work commences, the second is the potential cost increase that may incur as a result of the SOW rewrite, and the third is the development and maintenance of military staff who are trained, competent and authorized to amend SOWs in an operational setting. In some cases, such as system contractors, the theatre commander may not even be authorized to conduct this activity, which would necessitate the requirement being passed to a national authority for

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[121] Moore 50.

[122] Orsini 131.

implementation, a process which would undoubtedly further delay completion of the task and potentially affect operations.

A second consideration with respect to flexibility is any requirement to establish individual contractor support systems within the theatre, rather than the use of a common military system. This issue will primarily involve transportation, communications and data information systems that each contractor will want to establish and utilize to support their activities. In a relatively robust infrastructure such as Europe, this may not be a problem, but in a limited infrastructure theatre these contractor activities will be in direct competition with military requirements. In this latter scenario, "the old adage, "more is better," may not apply to contractor support, especially when the factory-to-foxhole concept may create hundreds of stovepipe contractor support systems."[123]

The use of contractor data systems, rather than DND systems, is potentially the greatest concern. The CF is focused on using information knowledge as a means of leveraging and improving operational support. The incorporation of separate contractor data systems into the DND information system will complicate this initiative by raising a number of compatibility, security and proprietary rights issues.

[123] Orsini 132.

5.14 Summary

There are a substantial number of issues that must be considered in the use of battlefield contractors. Although many of these issues must also be considered in a military only deployment, the use of contractors brings a new dimension and complexity to the operational appreciation that must be completed prior to their use. The issues include the risk to the operation, risk to the contractors, availability of contractors, contractor deployment readiness, legal implications, costs, additional planning and co-ordination, command and control, provision of military assistance, morale and the need for doctrine which incorporates the issues.

Contractors are not suitable for use in all theatres; therefore there is a requirement for DND to be able to make rational decisions on when they should be utilized, and when a strictly military capability is the better option. This leads to a requirement to have some sort of mechanism that can assist in the decision making process.

CHAPTER 6 – WHEN TO USE CONTRACTORS

6.1 Introduction

The decision to utilize contractors is part of a complex mission appreciation that should examine all of the issues and determine the best method of providing theatre support. This appreciation must consider both operational and support aspects and result in decision(s) that will not put the operation in jeopardy. Accordingly, the theatre commander, who is ultimately responsible for the success of the mission, must make the final decision. The U.S. contract doctrine utilizes their METT-TC[124] methodology to assist the commander in the decision process.[125] The Canadian Forces Operations Planning Process (CFOPP)[126] provides a similar decision-making methodology that covers major operational issues, but currently does not directly address contractor concerns. There remains a requirement to incorporate within Canadian doctrine a means or model to assist in the determination of when to make use of contractors.

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[124] METT-TC: mission, enemy, terrain, troops, time and civil. These factors are used to complete an assessment of the requirements for each operation. Additional details are contained in U.S. Army publication FM 3-0, Operations (Washington DC: Department of the Army, 14 June 2001) 62, 107.

[125] U.S. Army publication FM 100-21, Contractors on the Battlefield (Washington, DC: Department of the Army, 26 March 2000) 2-5.

[126] CF Publication B-GG-005-004/AF-004, Force Employment Manual (Provisional) (Ottawa: DND, 1998) Chapter 3.

6.2 When to use a Contractor

The four primary means of providing support are: military, coalition, contractor and HN. Integral military support is the only one of these in which the commander has ultimate authority; the remaining three all provide support but the commander does not have the same level of control or authority as he has with integral military capability. Coalition support has similar characteristics to integral military support except the command relationship will not be as strong as for national forces; regardless it can still be categorized as similar to military support. Host Nation Support, less HN military support which falls into the coalition category, has similar characteristics to contractor support, so falls generally within this category. Accordingly, the four categories can be grouped into two larger categories, military support and contractor support.

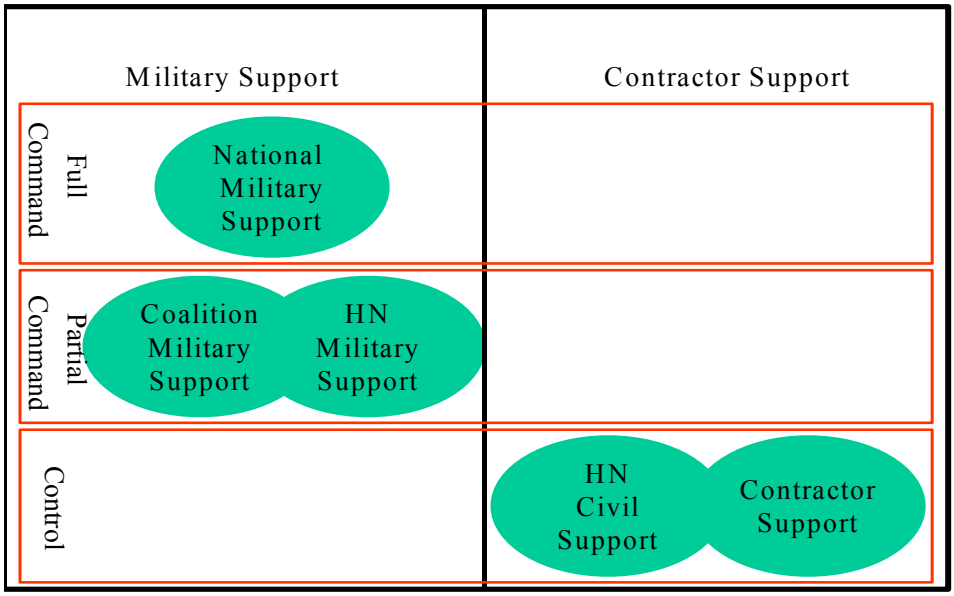

Figure 2: The Different Means of Providing Support

As discussed throughout this paper, the decision about whether to use a contractor will be based on a large number of factors, although the risk to the mission has to remain the primary factor. In addition to risk, other significant factors which affect the decision making process are cost, the complexity of the support service being considered, and the speed at which the contractor is able to provide the capability.

Determining the potential risk is a complex process that involves most of the issues discussed in Chapter 5. One means of addressing this factor would be the development of a 'suitability' matrix, a solution proposed by Cdr Addison in his AMSC paper entitled "Contractors on the Battlefield – Have We Done Our Homework?"[127] Cdr Addison's matrix incorporates the major risk issues and assigns each a numerical value. The total numerical value for all the risk issues can then be balanced against a baseline value that indicates whether the potential risk falls within pre-determined acceptability criteria. Like any numerical model, heated discussions can occur over the assigned values, but the advantage of this system is it establishes a quantitative value that can be applied in a similar manner from operation to operation.

[127] Addison 24-25.

	Value (10)	Low (2)	Med (5)	High (8)	Score
Peace/Conflict	8			*	64
Proximity	8		*		40
BCW	7	*			14
Ecology	7		*		35
Mining	7		*		35
Infrastructure	-5	*			-10
HNS	-5	*			-10
Protection	-4			*	-32
R & R	-4		*		-20
Overall Risk					116

Figure 3: Risk Assessment Table-New High Risk Theatre[128]

Using Cdr Addison's matrix, the '*' represent an example of an assessment for a relatively new theatre in which the threat risk is considered to be high. For this theatre, the important peace/conflict factor has a high value (8) which, when coupled to a high-threat value (8) results in a row score of 64. Infrastructure is considered to be of lesser importance so is assigned a lower value (-5), this coupled with a low availability value (2) results in a row score of –10. The total matrix score for all factors is 116, a relatively high score indicating that use of contractors in this theatre is not appropriate at this time.

[128] Addison 24. Peace/conflict refers to the likelihood of conflict, Proximity refers to the proximity the contractor may be to conflict, BCW refers to the likelihood of biological or chemical warfare, Ecological refers to the potential threat from environmental factors, Mining refers to the potential threat from land mines, Infrastructure refers to the availability of infrastructure, HNS refers to the availability of Host

	Value (10)	Low (2)	Med (5)	High (8)	Score
Peace/Conflict	8	#			16
Proximity	8	#			16
BCW	7	#			14
Ecology	7	#			14
Mining	7	#			14
Infrastructure	-5		#		-25
HNS	-5			#	-40
Protection	-4		#		-20
R & R	-4		#		-20
Overall Risk					-31

Figure 4: Risk Assessment Table-Mature Lower Risk Theatre

In comparison, the assessment for a second, more mature theatre, illustrated in Figure 4 by the '#', has the important Peace/Conflict value (8) coupled to a much reduced low-threat value (2) resulting in a row score of 16, with the entire matrix score being –31. The much lower total score in this second theatre example indicates that use of contractors is more appropriate in this theatre than for the first theatre. As with any proposed numerical matrix system, the factors, their importance, and any weighting values utilized will have to be further refined using historical and current data from ongoing missions to assist in quantitatively defining the values.

Nation Support, Protection refers to the availability of protection for contractor staff, and R&R refers to the proximity of R&R sites for personnel proceeding on leave.

The complexity of the support required is another factor that must be considered when examining the potential use of contractors. It will always be easier to contract simple services such as accommodation cleaning or catering compared to more complex services such as health support (medical and dental care) or fire and environmental safety. Accordingly, the ability to utilize contractors will be partially dependent upon the complexity of the support required. Directly tied to the complexity factor are the factors of required reaction time and cost.

The response or reaction time will directly affect the ability to deploy contractors in support of operational missions. The faster the contractor is required, the less time there will be to find and train qualified staff, so the less capability there will be to deploy unless the contractor has personnel on standby status to meet the requirement. This is particularly true for personnel required to perform skilled or complex support services. One means to resolve this issue is to maintain personnel on a ready-to-deploy standby list, but doing so incurs a cost to the contractor and ultimately to DND. In fact, in some cases such as doctors, it might cost as much, or more, to have a doctor on a contractor standby list as it would to add another doctor in the CF. Lengthening the response time from days to months, possibly in the six-month range, significantly mitigates the impact of reaction time except in very specialized support areas.

Directly tied to the issues of complexity of service and response time is the factor of cost. The more complex the service and the faster that service is required, the more

DND will have to pay to contract that service. In theory, contractors should be able to provide support services at a cheaper cost, although the discussion in Section 5.8 indicates this will not always be the case. Cost will always remain an issue given the present financial climate of the CF and Federal government. It can be assumed however, that if contractors are more expensive than other options, they will not be used unless there is an operational imperative, such as OPTEMPO, to do so.

These factors can be used to develop a model or graph to assist in the decision making process as to whether use of a contractor is suitable for any specific operation. Figure 5 below provides an illustration of what this model could look like.

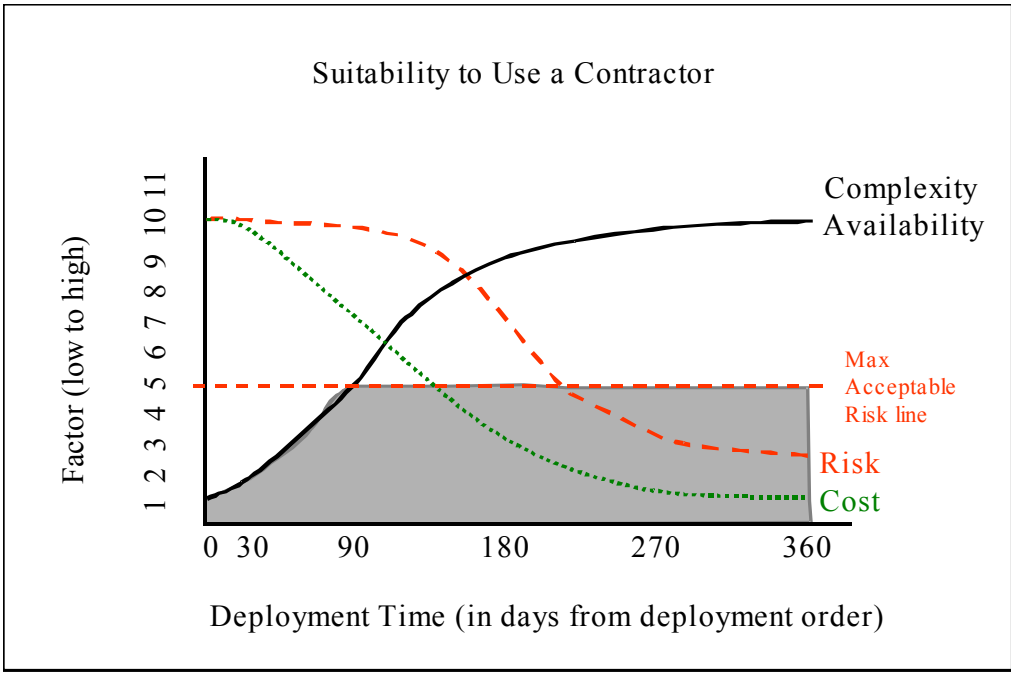

Figure 5: Suitability to Use Contractor Graph

The X-axis represents the time available for deployment in days, whilst the Y-axis represents a factor scale ranging from lowest to highest value. Each of the factors can be plotted and the resultant model provides an indication that will assist the decision making process. The risk values can be established from a table matrix similar to that proposed by Cdr Addison. Risk considerations will usually commence with relatively high values early in an operation, and will decrease over time. Regardless of the resulting risk line, there is a requirement to establish a maximum acceptable risk line; a value above which contractor support should not be contemplated as to do so might jeopardize the success of the operation. The cost line will be a reflection of both the response time available and the complexity of the service required. Faster response (deployment) times will cost more than slower response times. High complexity (such as health care or technical specialists) capabilities will also cost more than lower complexity capabilities (such as cleaners or food services), and the cost to have a high complexity capability available for a short notice deployments will be significantly more expensive than for lower complexity capabilities. Ultimately, cost will not necessarily jeopardise an operation, but it will be a factor that requires consideration. The complexity of the service required would be a line reflecting low complexity (skills) being available early, to higher complexity services requiring additional time (unless availability premiums are paid) in order to be instituted. The complexity of service required will only jeopardise an operation if contractors are the sole source for that particular skill set. The shaded portion of the graph represents that area where use of a contractor, or locally hired

civilians, makes the most sense and should not jeopardize the mission. Use of contractors outside the parameters of the shaded area must be examined very carefully because of the potential risk of operational failure. This un-shaded region indicates the area where the use of integral military, or possibly coalition support, would be necessary in order for mission success.

The graph at Figure 5 is representative of the type of mechanism needed in order to make a valid assessment regarding the proposed use of contractors for a given operation. Each of the three value lines (risk, cost, and complexity) will have to be developed using unique data applicable to that specific operation. Thus, if the proposed operation had a low threat risk (i.e. peacekeeping) the risk line would not reflect the S curve shown, but might be closer to the maximum risk line. This would allow the grey shaded area to move left until it touched the 'complexity' line, thereby indicating the use of contractors would be appropriate much sooner than as presently indicated in Figure 5.

The development and use of this type of model would provide an analytical tool that would assist in the decision making process on the suitability to using contractors on any operation. This would provide some framework and structure to a very complex decision making process that currently does not have a lot of doctrinal support. Further development of this, or a similar model, would assist future commanders during their assessment of the support required for their mission.

CHAPTER 7 – SUMMARY, CONCLUSION AND RECOMMENDATIONS

7.1 Summary

Contractors have been a part of the battlefield for many years, and historically have been most heavily involved in the provision of support services. In many U.S. operations, they have represented a significant part of the deployed force, with representation in the 1:3 to 1:10 contractor to soldier range. They have brought a substantial capability to operations, which has allowed theatre commanders to utilize soldiers for other purposes. This U.S. trend of using contractors will likely continue to increase in the foreseeable future because of budget considerations and the increasingly technical nature of military hardware.

The Canadian military has also seen increased use of contractors over the last ten years. Budget reductions and ASD initiatives mean contractors have become acceptable in areas that traditionally were the domain of soldiers. Accordingly, major equipment such as the Cormorant Search and Rescue Helicopter, the Griffon helicopter, and the MCDV are all being supported by the use of contractors. Although these equipments are primarily commercial in nature, both the Griffon and the MCDV fleets have deployed outside Canada on operations, and will undoubtedly continue to do so in the future.

Canada has also commenced utilization of contractors in operational areas for the provision of support services. The Bosnia CSP project represents the latest and largest use of contractors for this purpose. Although the Bosnia CSP has had some difficulties, these were not unexpected, and the contract has reduced the number of support soldiers deployed to Bosnia over the last two years by some 700 soldiers. Canada is now in the process of initiating the CANCAP contract to provide an operational support capability that potentially could be activated anywhere Canadian soldiers deploy.

Militaries have adopted use of contractors for a number of excellent reasons. Contractors can provide an on-call capability that replaces force structure that no longer exists because of downsizing, that may never have existed, or that augments or replaces force structure required elsewhere because of operational tempo. Contractors are frequently used to provide specialized, or high-cost, low-demand services, such as weapon or aircraft system maintenance, that are not economically viable for the military to maintain. The changing nature of conflict, with increased deployment distances, asymmetric threats, and an inability to define the location of the next operation, means many militaries are overstretched in their ability to deploy and sustain themselves. Contractors can also be used to replace force structure when political or other constraints prevent, or limit, the use of military forces. However, these positive aspects of using contractors need to be balanced against the potential implications of the risk to operations. Contractors are not suitable for the provision of support in all theatres. There

is a definite requirement to ensure that a minimum 'core' military capability is retained, and that doctrinally, contractors are used to augment military capability, not replace it.

There are a considerable number of factors that must be considered when contemplating the use of contractors. These factors have military implications, but the implications change substantially when contractor dynamics are applied. The most significant factor is that of risk, this includes both the risk to the success of the operation, and the risk to the contractors themselves. Tied to the success of the operation are the availability of contractors, their ability to respond to operational timelines, contractual issues, planning concerns, command and control issues, the necessity to support contractors and morale issues. The risk to the contractors themselves is directly tied to the theatre threat scenario. Overall, there are doctrinal and cost issues, as well as the basic principles that require consideration during the process of deciding to utilize contractors.

The ultimate decision to use, or not use, a contractor is a complex one that must consider a multitude of inter-related issues. These issues need to be examined and then incorporated into doctrine to ensure the appropriate use of contractors. The development and use of a matrix or model that incorporates these issues, and gives them a relative rating (value) is one method of providing a more scientific means of assessing a very complicated decision. It would also provide a tool that could provide a means to rate assessments between different theatres. Over time, the model would incorporate

adjustments based on operational lessons learned. This tool would assist in removing some of the individual perceptions about the use of contractors that exist because of the lack of a quantitative means of determining the suitability of using contractors.

7.2 Conclusion

There is a definite place for contractors on the battlefield, but care must be taken to ensure that they are used when and where appropriate. Use of battlefield contractors can involve high risk and possible operational failure if they are used in unsuitable circumstances. Contractor use is suitable for lower levels of conflict, particularly when the threat level has been reduced or removed, a situation that frequently does not exist at the start of operations. Contractor use is not appropriate for high intensity or high threat warfare, as the risk of operational failure becomes too high.[129] Militaries need to maintain a 'core' level of military support capability that will allow them to support operations in theatres where the use of contractors is not appropriate. Total dependence on system contractors for specialized equipment is a high-risk support strategy. This support strategy means contractors will be required to work in a high-risk environment, or the equipment must be removed from the operational theatre with the resulting requirement to stock replacement equipment in theatre. Neither of these situations can be considered ideal for the commander, and both incorporate a level of operational risk.

[129] Reeve 13.

Although Canada is proceeding to integrate use of contractors into our force structure (the CANCAP project being a recent example), we have not yet put in place the institutional structures required to properly employ contractors. There is little Canadian doctrine written on the subject, and no formal training courses for operational contract administrators or supervisors have yet been established. Commanders also lack knowledge of their responsibilities in this area, an observation noted in the Bosnia CSP review.[130] Across the CF, there are numerous misconceptions about the role of contractors, some as a result of downsizing initiatives such as ASD, and others by a failure to properly educate soldiers about contractors. Incorporation of contractor information within training, and updating through various information processes, would help to alleviate this situation.

There is a definite requirement to institutionalise the use of contractors if the CF is to consider expanding their use. This has to include the writing of doctrine and the incorporation of that doctrine into training. Part of this process should be the development of procedures or mechanisms to assist in the decision process to determine when it is, and is not, appropriate to utilize contractors. The use of these types of tools will help to alleviate many of the concerns about the use of contractors.

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[130] NDHQ 3350-1 (J4 Log) Memorandum, November 2001. BALKINS CONTRACTOR SUPPORT PROJECT (CSP) REVIEW TEAM-INITIAL DRAFT OF FINDINGS: 12.

7.3 Recommendations

The use of contractors by the CF will continue to rise; therefore the following recommendations are made to ensure that contractor use does not significantly impact on the success of operations:

a. Contractors should only be considered for operations where the threat risk and deployment response time available does not put the mission in jeopardy. This requires the determination of contractor acceptability on a case by case basis;

b. Contractor doctrine must be developed and instituted that incorporates the many issues their use invokes. Of particular importance is the development of a mechanism or model that would assist in determining when it is appropriate, or not, to use contractors; and

c. Contractors must be considered to be an augmentation capability, rather than a replacement capability. This requires the identification and continued maintenance of 'core' military support capabilities within the CF to respond to high risk or high reaction operations.

LIST OF ABBREVIATIONS

AEF	American Expeditionary Force
ASD	Alternative Service Delivery
AO	Area of Operations
Bosnia CSP	Balkans Rationalization Contractor Support Program
BRSC	Brown and Root Services Corporation
CANCAP	Canadian Contactor Augmentation Program
CCOs	Contingency Contracting Officers
CF	Canadian Forces
CFOPP	Canadian Forces Operational Planning Process
CONDO	Contractors on Deployed Operations
COTS	Commercial off the shelf
DND	Department of National Defence
FM	Field Manual
FMS	Foreign Military Sales
GAO	General Accounting Office
HN	Host Nation
HNS	Host Nation Support
IFOR	Bosnia Implementation Force
LOC	Lines of Communication
LOGCAP	Logistics Contractor Assistance Program
LOGCAS	Logistics Contractor Augmentation Support
MCDV	Maritime Coastal Defence Vessel
METT-TC	Mission, Enemy, Terrain, Troops, Time and Civil
NBC	Nuclear, Biological, Chemical
NDA	National Defence Act
NDHQ	National Defence Headquarters
OPTEMPO	Operating tempo
POM	Preparation for Overseas Movement
POR	Preparation for Overseas Replacement
PWGSC	Public Works and Government Services Canada
QOL	Quality of Life
RSOI	Reception, Staging, Onward Movement, and Integration
R&R	Rest and Recreation
SCP	Supply Chain Project
SFOR	Bosnia Stabilization Force
SOFA	Status Of Forces Agreement

SOW	Statement of Work
UAV	Unmanned aerial vehicle
UK	United Kingdom
U.S.	United States
USGET	United States Support Group East Timor
Y2K	Year 2000

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