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RESTRUCTURING LOGISTICS: REFLECTING REALITY, CHANGE FOR TOMORROW

Major K.A.M. Doucet

JCSP 35

Master of Defence Studies

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PCEMI 35

Maîtrise en études de la défense

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CANADIAN FORCES COLLEGE – COLLÈGE DES FORCES CANADIENNES
JCSP 35 – PCEMI 35
2008 – 2009

MASTER OF DEFENCE STUDIES – MAÎTRISE EN ÉTUDES DE LA DÉFENSE

**RESTRUCTURING LOGISTICS: REFLECTING REALITY, CHANGE FOR
TOMORROW**

By Major K.A.M. Doucet

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Word Count: 19 886

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ABSTRACT

The Logistics Branch a part of the larger military support community has traditionally provided stalwart support to the CF despite being continually overlooked and misunderstood by senior leadership and the members of the combatant components. With the changing global security situation, the current pace of operations and the increasing threats to traditionally low risk support activities, logisticians can no longer afford to accept the status quo. This paper will argue that in order to remain relevant and effective to the CF in the future, the Logistics Branch will need to transform its image and restructure its doctrine and training to better reflect the realities of military operations in the 21st century. In order to garner recognition and support at all levels, the Logistics Branch will need to promote a better understanding of the value and complexities of logistics activities and dispel the myths and misconceptions fostered by its current single branch construct and over burdened career management structure. An effective way to achieve this objective would be to divide the branch resources along environmental lines and assign the responsibility for sustainment and logistics personnel management directly to the environmental commanders. Two other areas requiring significant change are training and doctrine which have fallen out of synch with reality and no longer accurately reflect current operations especially in the light of today's non-contiguous battlespace. As Canada and its partner nations move towards a future of joint and combined military operations, the Logistics Branch will need a strong relevant base of support training and doctrine in order to move forward on the development of joint and combined processes.

RESTRUCTURING LOGISTICS: REFLECTING REALITY, CHANGE FOR TOMORROW

INTRODUCTION

As a vital enabler providing support to all Canadian Forces (CF) operations domestically and abroad, the Logistics Branch is responsible for many of the critical life support functions required to sustain the Army, Navy and Air Force combat resources as they fulfil their many tasks and missions on behalf of the government and people of Canada. As a single organization the Logistics Branch is comprised of thousands of personnel from numerous different trades including supply, transportation, postal, food services, administration and finance, and is charged with the responsibility of meeting the day to day sustainment and specific combat needs of all three military elements.¹ Despite the vital sustainment role played by the members of this branch, their contributions are often overlooked or taken for granted by the leadership and members of the various combatant components. The key reason for this oversight is a general lack of understanding of the complexities of planning, organizing and delivering logistics support often over extremely long distances, difficult terrain and, especially in today's operating environment, in increasingly high threat situations. The responsibility for this lack of understanding falls squarely on the shoulders of the logistics senior leadership who for generations have accepted the status quo and failed to actively promote a greater understanding and recognition for the critical role of logistics support. The current integrated logistics branch construct under a single cap badge fosters misconceptions about logistics support that have permeated the highest levels of CF leadership and negatively influenced decisions made at the

¹ The term *element* in the military context refers to the three military elements Army, Navy and Air Force.

strategic level. The concept of logistics interoperability, while applicable to some of the technical skills within a given occupation, does not equate to environmental interoperability where individual and collective combat and survival skills are key to a logisticians' effectiveness on operations. By grouping all its resources under a single cap badge without occupational distinctions, the Logistics Branch promotes the misconception that it has a disproportionately large number of resources compared to other CF organizations and easily becomes a target of opportunity for spending cuts and force reductions. Further complicating the issue is the Career Management (CM) structure wherein logistics is portrayed as just another component of a larger organization identified as *support*. These areas provide a strong argument for the need to improve the understanding and management of CF logistics support and possibly even dividing the Logistics Branch along environmental lines thus assigning the responsibility for logistics support to each of the Environmental Chiefs of Staff (ECS). A final area of significant concern is the lack of relevance of logistics support doctrine and training. A great deal has changed since the end of the Cold War especially in the way that logistics activities are conducted on operations and the increased level of direct threat to support operations in the new non-contiguous battlespace of land based operations. Yet despite the changes at operational and tactical levels, logistics training and doctrine are still grounded in the principles of World War II and the linear battlespace. The lack of attention to the development of relevant doctrine and training has created a generation of logisticians who make things up as they go along and resort to "gut feel" decision making and improvisation when it comes to managing vital sustainment issues. In today's climate of change with rapid developments in technology, increased threat to operations and focus on joint operations, the logistics community needs to redefine its structure and develop practices that are more in line with the realities of the 21st Century.

This paper will argue that the Logistics Branch needs to transform itself to reflect the reality of today's operations if it is to remain relevant and effective in supporting the Canadian Forces in the future. The process of Logistics transformation will need to recognize the urgent requirement to educate the CF population on the roles, capabilities and effective employment of support resources. It will require a significant restructure of the logistics branch along environmental lines and the development of relevant training and doctrine to accurately reflect the realities of today's national and joint operational environments. Achieving this goal will require the active involvement and interest of Canadian Forces leadership at all levels to develop a better appreciation of the complex and vital contributions provided by the CF support community.

LITERATURE REVIEW

This section provides a brief overview of some of the major documents cited in support of various portions of the paper. It is intended to provide context to the salient points extracted from each document in support of the arguments put forward in the remainder of this discussion on CF logistics.²

In 2003, Colonel Charles Davies drafted a paper for the Advanced Military Studies Course (AMSC) describing the difficulties the CF was going to suffer in the transformation of its sustainment capabilities to meet the demands of the 21st Century battlefield. Sustainment Transformation: If You Don't Know Where You're Going, Any Road Will Get You There,³ provides an explanation of the role we should be playing as world leaders in sustainment

² Author's note: Ironically, while one of the key points presented in this paper is the apparent lack of interest in logistics outside of the support community, there was a corresponding lack of available literature on the topic of military logistics support and notably the majority of what the author was able to uncover was in the form of unpublished papers written by members of the Logistics Branch.

³ Colonel Charles Davies, "Sustainment Transformation: If You Don't Know Where You're Going, Any Road Will Get You There" (Toronto: Canadian Forces College Advanced Military Studies Course Paper, 2003).

transformation as a result of our breadth of experience in many different missions and theatres of operations. However he is quick to point out the many things that hold us back from attaining our objectives and key among those reasons are the general lack of interest in sustainment issues and poor senior leadership within the CF. The world, and for the most part Canadians, have recognized that there is a requirement to change, adapt policies and reap the benefits of technology and new equipment; yet as long as sustainment requirements have to compete against the demands of the fighting echelon they will receive only transient and superficial levels of support and funding. Davies identifies three challenges that must be addressed in order to bring appropriate focus to the needs of the sustainment community. These challenges culminate in the need for a CF sustainment champion whose sole responsibility is to focus on the issues relating to the role of supporting the Canadian military's operations. Davies' paper supports the discussion about the lack of current sustainment doctrine and effectiveness of training as well as the need for solid leadership within the support community to develop a plan and lead the CF sustainment transformation. Davies' paper also alludes to the lack of military funding as a cause for the army's disinterest in developing any sustainment initiatives at the expense of furthering the markers in the combat forces.

A more pointed criticism of the stagnant state of logistics doctrine can be found in Maj John Conrad's dissertation, "Wind Without Rain: The Erosion of Canadian Logistics Thought Since The Hundred Days"⁴. Conrad begins with a great deal of pride in the accomplishments of the Canadian military and the reputation earned as a result of the nation's contributions in WWI. He recognizes that it was a time of incredible change and adaptation as the combat service

⁴ Major John Conrad, "Wind Without Rain: The Erosion of Canadian Logistics Thought Since The Hundred Days" (Toronto: Canadian Forces College Masters of Defence Studies Research Paper, 2004).

support (CSS)⁵ capabilities were being rapidly developed and reworked to better support the continually changing needs of a war fighting army. Acknowledging that key to this success was the active “attention afforded logistics in 1916 by Field Marshall Haig at the operational level and Lieutenant-General Byng at the tactical level...,”⁶ two senior officers who understood the importance of developing effective logistics support. The changes and innovations developed as a result of Haig and Byng’s direct involvement had a significant impact on the Canadians’ success during the Hundred Days Offensive, August to November 1918 which “would set the mold for Canadian Army combat service support (CSS) doctrine and practices for the remainder of the twentieth century.”⁷ Conrad is quick to point out that except for the mechanization of the army during WWII, there has been no significant change to CSS doctrine in almost 100 years and blames both the army leadership’s lack of interest and the logistics community’s mismanagement for the current state of outdated support doctrine and practices. Like Davies, he also notes the incredible amount of logistics experience Canadians have gained over the years as a result of the support provided to Canada’s involvement in numerous UN and NATO operations and how that experience should place us among the world leaders in the development of logistics doctrine. This reality appears to have escaped the attention of the military leadership as we continually try to reach for and adapt the doctrine and practices of our allies instead of developing our own. Finally, Conrad does offer some hope for the future as he introduces the role of Directorate of Army Doctrine (DAD) which was established in 2002 and is responsible for managing army doctrine. Within that organization, DAD 9 Sustainment would be the

⁵ Combat Service Support or CSS is a term now used in the Canadian Army to describe the functions that support the combat troops and includes the core logistics functions of supply, transportation, finance, postal, food services as well as other support capabilities such as maintenance, medical, chaplains, legal etc. In discussions of army logistics, the term CSS or support are often used interchangeably in discussions of sustainment operations.

⁶ Conrad, *Wind Without Rain...*, 4.

⁷ *Ibid*, 3.

champion for rewriting the CSS doctrine which will in turn drive the required changes into the army's support training system. This document supports the paper's claim of logistics neglect on the part of the branch as well as the army and leads into an examination of the effectiveness of DAD 9 in developing CSS doctrine over the past nine years.

Over the past decade there have been significant changes in the global security environment that have driven the requirement for transformation of the military's equipment, doctrine, tactics and training. In his paper titled, *Canadian Forces Transformation And Logistics*,⁸ Cdr Irwin refers to the 2005 Defence Policy Statement⁹ which he states "lays the groundwork for the transformation of the Canadian Forces.... [to make them]... more effective, relevant and responsive."¹⁰ Throughout his paper Irwin argues that logistics is the enabler that is required to successfully transform the CF and that transformation is a leadership driven activity. He also highlights a significant institutionalized disinterest in logistics at the senior levels of military leadership which will in turn hamper the military's ability to fully and effectively reach its transformational goals. Irwin's paper also supports the discussion regarding the lack of effective training direction for logistics officers but ironically points out that due to that failure and the generic nature of Logistics Officer training, our "logisticians are often better suited to working in a joint environment than the rest of the Canadian Forces."¹¹

After returning from his 2006 tour as Commander of the first National Support Element in Kandahar in the opening months of Canada's first sustained wartime experience since Korea; Lieutenant-Colonel John Conrad provides a unique and disheartening perspective

⁸ Cdr S.E. Irwin, "Canadian Forces Transformation And Logistics" (Toronto: Canadian Forces College Masters of Defence Studies Research Paper, 24 April 2006).

⁹ Department of National Defence, *Canada's International Policy Statement a Role of Pride and Influence in the World – DEFENCE*, (Ottawa: DND 2005).

¹⁰ Irwin, *Canadian Forces Transformation...*, 5.

¹¹ *Ibid*, 66.

on leadership and the Army's pervasive attitude towards its CSS elements. In his chapter, *We Three Hundred: Logistics Success in the New Security Environment*,¹² he offers firsthand impressions of the significant change in the logistics operating environment and the insidious class distinction between the army's fighting forces and its CSS backbone. Conrad's experience further supports this paper's claim that the army is not only disinterested but actively fostering a negative demoralizing attitude towards CSS elements and their contributions. Additionally, although a seasoned professional logistician and strong proponent of the support community, he reluctantly admits to the inadequacy of CSS doctrine and expresses his concerns with the lack of senior level support in understanding the realities of the current operating environment. "I worried constantly about logistics failing in Kandahar. I never doubted for a second that failure of Canadian logistics in Afghanistan would be mine to own notwithstanding any professional discussions that had gone before."¹³ Conrad's article articulates his frustration with the army's apathetic attitude towards CSS concerns and the morale breaking effect it can have on support personnel at the operational end.

Upon his return from commanding the National Support Element in Kandahar, Afghanistan, Lieutenant Colonel Horlock drafted a Post Operation Report (POR)¹⁴ summarizing the significant lessons learned and observations garnered throughout the NSE's tour in theatre. In his writing LCol Horlock noted a number of constraints and decisions made by senior leadership that actually hampered the CSS training and preparation efforts and demonstrated a clear lack of understanding of the technical capabilities and operational diversity across the CF's

¹² LCol John Conrad, "We Three Hundred: Logistics Success In The New Security Environment," in *In Harm's Way: The Buck Stops Here: Senior Military Commanders On Operations* (Winnipeg: Canadian Defence Academy Press, 2007). 257-269.

¹³ Conrad, *We Three Hundred...*, 260.

¹⁴ LCol K.W. Horlock, *Post Operation Report (POR) Summary – Joint Task Force Aghanistan National Support Element (NSE) Rotation 5* (Kandahar Airfield: file 3350-3-1 (DCO), 1 September 2008).

logistics community. He stressed the need to focus adequate attention on the individual and collective (team building) training for logistics units prior to deployment to any theatre of operation and explained the difficulties of having to provide day to day support to the task force while trying to conduct vital survival skills training with a mixed environment (army, navy and airforce personnel) NSE. Horlock also elaborated on the depth of contracting support in theatre and the need to ensure senior CSS personnel are properly trained to effectively manage this new and growing capability on operations.

While it is generally accepted within the logistics community that a great deal of the existing CSS doctrine is significantly out of date, very little has been done to improve the situation or offer alternative solutions to the problems. In a 2008 article for the *Canadian Army Journal*, *Practical Sustainment Concepts for the Non-Linear Battlespace*,¹⁵ Major Devon Matsalla offers a unique perspective of the actual CSS operations as they are being conducted in Afghanistan today. After briefly recapping the current echelon based sustainment doctrine that is rooted back to the first and second world wars, he effectively explains why this doctrine is no longer effective in today's operational environment. With the intent of stimulating further thought on the development of new sustainment doctrine, Matsalla provides a description of the ongoing CSS operations in the non-linear battlefield in Afghanistan based on "...a sustainment network founded on interdependencies between secure nodes..."¹⁶ and introduces the concept of nodes and links to replace the echelon system. This article is reflective of the CSS acknowledgement that logistics doctrine is seriously out of date and reinforces the need to update or rewrite our manuals to reflect today's operational environment. Matsalla's attempt to describe current CSS operations is a hopeful first step in reviving the interest of CF leadership in

¹⁵ Major Devon Matsalla, "Practical Sustainment Concepts for the Non-Linear Battlespace," *Canadian Army Journal* Vol. 11.2 (Summer 2008): 45-62.

¹⁶ Matsalla, *Practical Sustainment Concepts...*, 45.

developing new and more relevant sustainment doctrine. In his own words, “This paper is not intended to replace current doctrine; it is rather, hoped that it will spark questions on its future in this non-linear environment.”¹⁷

¹⁷ *Ibid*, 45.

CHAPTER 1: UNDERSTANDING LOGISTICS – A BIT OF HISTORY

You will not find it difficult to prove that battles, campaigns, and even wars have been won or lost primarily because of logistics. - General Dwight D. Eisenhower

The role of logistics is not well understood by other members of the military community to the extent that an effective logistician will often find his efforts overlooked and taken for granted especially in the course of peacetime operations. For many members of the combat component leadership, the conduct of logistics activities are less important than the effect they have on their operations, and only when support does not meet their expectations do commanders become concerned with the logisticians' activities. Between the end of the Second World War and the end of the Cold War, most of the CF's efforts were focused on training for contingency operations, domestic activities and UN peacekeeping deployments. During this time the majority of the logistics support was streamlined to facilitate cost reductions and increase efficiency with a focus on the use of static organizations, fixed infrastructure and reliance on support from the local economy. Many of today's CF military leaders developed their understanding of logistics support in this preparation environment through scripted training exercises and staff college simulated operations, all of which were completely devoid of the opportunity to experience combat operations and the effects of good or bad logistics support. During this time the focus of officer professional development and training was primarily centred on developing sound battle tactics, leadership and combat skills. Young officers were encouraged to dismiss any logistical concerns that might interfere with their operational plans

and focus solely on the effects of their combat operations.¹⁸ In this environment where logistics issues were merely “fairy dusted” away it is easy to understand why many of today’s military leaders lack a true understanding of logistics capabilities, limitations and planning considerations. Without a clear understanding of the contributions of all the components of the military, future leaders are bound to re-live the mistakes of our past. Although young leaders are encouraged to study military history and key battles of the past to learn vital lessons in strategy and tactics, there is little emphasis placed on understanding the role the logistics support organizations played in winning or losing those battles. As a result many senior officers do not fully understand the value, capabilities and effective employment of the logistics elements in their organizations. Logistics support is not a new concept; the need to feed, pay, equip and arm a military has always been a vital component to successful operations. From volunteer militias to professional armies, the need for support activities can be traced as far back as the Roman Legions and the Mongols in the 13th Century.

The Roman legion’s ability to march fast and far owed much to superb roads and efficiently organized supply trains. These supply trains included mobile repair shops and a service corps of engineers, artificers, armourers and other technicians. Supplies were requisitioned from local authorities and stored in fortified depots; labour and animals were drafted as required.

Another example of a global power which derived much of its strength from developing excellent logistics is the Mongols of the 13th century. Their cavalry armies had one of the most efficient logistical systems ever known....The fact that the Mongols conquered from Europe to the Pacific proves the value of their efficient logistics system.¹⁹

¹⁸ Author’s personal experience on Brigade and Divisional exercises in Wainwright 1989-91, at Intermediate Tactics Course in Gaagetown in 1997 and at Canadian Land Force Command and Staff College in Kingston 2000 and 2002. The emphasis in all of these situations was on developing tactics, leadership skills and planning capability with very little regard for logistics requirements and how they would affect the operations.

¹⁹ Department of National Defence, *Logistics Branch Handbook*, [on-line] available from <http://dgmssc.ottawa-hull.mil.ca/logbranch/handbook.asp>; Internet; accessed 18 May 2011. Section 303.

World War II alone has numerous examples of military operations that were seriously affected as a result of the commander's appreciation of logistics requirements and the difficulties in supplying even the basics such as food, ammunition, fuel and medical supplies. As the British advanced from Antwerp to Arnhem in September 1944, they were forced to halt having outrun their supply lines. With the British momentum stopped, the Germans who had retreated were able to take advantage of their shortened supply lines and developed a strong defence to further stall the British advance.²⁰ In January of that same year, at the beaches of Anzio, as the Allies landed 36,000 troops on the ground the commanders recognized that their biggest problem was going to be sustaining the masses. In addition to the huge quantities of supplies required, they were also concerned with the reliability of the transportation they had been provided. The concern was over the ability and dedication of the undefended merchant marine vessels to deliver the support as and when required especially because their civilian captains did not fall under command of the military commanders.²¹ One of the most famous examples of a battle lost as a result of logistics is the failure of General Friedrich Paulus and the German 6th Army at Stalingrad in 1942. Paulus lost the offensive and was eventually forced to surrender despite his initial success in the city, due to a serious shortage of ammunition, food and fuel which was further complicated by the severe Russian winter.²²

Here in Canada the ability to secure logistics support has had a significant impact on our development as a country. With our nation's military roots firmly entrenched in the history of both England and France it is ironic to realize that the final battle between British Major-General

²⁰ Thomas Leckwold, "Momentum Lost: The Battle for the Arnhem Startline," <http://www.militaryhistoryonline.com/wwii/articles/arnhemstartline.aspx>; Internet; accessed 5 October 2011.

²¹ Irwin J. Kappes, "The Allies' Greatest Blunder of World War II," <http://www.militaryhistoryonline.com/wwii/Italy/articles/anzio.aspx>; Internet; accessed 5 October 2011.

²²"Stalingrad," <http://www.spartacus.schoolnet.co.uk/RUSstalingrad.htm> ; Internet; accessed 5 October 2011.

James Wolfe and the French Marquis de Montcalm which set the path for Canada's future, was significantly influenced by the need for logistics support. Wolfe had begun attacking Canada in the summer of 1759 and encountered incredible resistance in Quebec from Montcalm's combination of French troops and Canadian militia. By the fall both commanders had begun to feel the effects of the protracted battle and "...logistics factors began to affect the siege in that both sides became concerned over food supplies."²³ Montcalm, whose militia was made up of local farmers, recognized the need to release them from their duties in order to ensure crops were harvested before the winter. Keeping only his regular troops he let his militia go home and significantly reduced his defensive strength. Meanwhile Wolfe was feeling the strain on his extended supply line and understood that with winter approaching his supplies would be cut off once the river froze. In a desperate move Wolfe attacked at the Plains of Abraham accidentally hitting the weakened Montcalm defence and the rest is history. The battle at the Plains of Abraham is no doubt a pivotal event in shaping Canada's future and a battle studied by soldiers and students alike. "What is not generally known [and often overlooked] is that a lack of sufficient supplies on both sides contributed to the surprise attack by Wolfe, and the fall of Quebec."²⁴

The role of logistics has often been overlooked to the point where the day to day sustainment and support requirements are not considered in the planning, funding and creation of new military organizations. This oversight on the part of the Canadian military leadership has occurred throughout our history and is indicative of a lack of understanding of the need to plan for and include logistic support requirements.

²³ Defence, *Logistics Branch Handbook...*, Sect. 303.

²⁴ *Ibid.*, Sect. 306.

The government of the Province of Canada...formed a new military service in 1855, made up of volunteers. These volunteer units, known as the “Active Militia” were uniformed and armed even in peacetime, and carried out annual training for which they were paid...sixteen troops of cavalry and fifty companies of rifles, and...seven field batteries and five companies of artillery. No ‘administrative’ or ‘logistic’ units were included to look after this force of 5,000.²⁵

Unfortunately in 1855 this oversight and the lack of the requisite support organizations would inhibit Canada’s ability to project its forces and provide protection in other areas of the country as these units were completely dependent on garrison and local resources for daily support as “...these services continued to be supplied by civilian contractors and not by military logisticians....”²⁶

As Arnold Warren points out in his historical work on the Canadian Army Service Corps, entitled *Wait for the Waggon*, despite the acknowledgement of some who had learned the lessons it was often very difficult to get leadership to move forward and endorse the need for and establishment of support resources. When the British finally pulled out the last of their troops in 1871, Canada was left with militia made up of an assortment of military units of various shapes and sizes with no overarching control organization. “It had no organized staff and none of the departments required to transport, feed, supply, arm and pay the troops, and to look after their medical needs.”²⁷ It took the government thirty years to acknowledge the requirement to have an effective logistics capability and almost instantly the militia began to benefit from the new capabilities. At the militia summer training camps a newly created Army Service Corps, a logistics organization, provided visible improvements to the food and living conditions for the militia soldiers. This resulted in an increase in the retention rate of Canada’s volunteer force.

²⁵ *Ibid.*, Sect. 306.

²⁶ *Ibid.*, Sect. 307.

²⁷ Arnold Warren, *Wait for the Waggon* : The Story of the Royal Canadian Army Service Corps (Canada: McClelland and Stewart Limited, 1961), 27.

Upon returning from the militia summer training camps of 1906 “An editorial in the *Military Gazette* [read]the writer is able to say with assurance of accuracy that nothing has done more to improve the militia as a whole than the work of the Army Service Corps.”²⁸

Over time the need to ensure troops were properly fed and supplied gave birth to the Royal Canadian Service Corps. “In its simplest iteration, this aspect of supply evolved to become a responsibility of the Royal Canadian Service Corps.”²⁹ The role of moving the supplies and ammunition, which “...had to be carried by the force...became the responsibility of the Royal Canadian Ordnance Corps.”³⁰ Over the years these support organizations, which have evolved into the current CF Logistics Branch, have continually adapted to meet the needs of Canada’s military. Logistics soldiers, sailors, airmen and airwomen have proven their worth through two world wars, Korea and numerous UN and NATO missions including Afghanistan. They have suffered casualties and earned awards for individual and collective actions. But despite these accomplishments, the logistician’s role is still not well understood outside the support community.

There are many even within senior levels of the military that have a comprehension of logistics as no more complex than moving materiel, while in reality it is significantly more complicated. The process of military logistics is not often regarded by operators as glamorous but its critical nature should never be overlooked.³¹

Operationally the inability to grasp the complexity and manpower requirements behind effective logistics support can be seen in the seemingly arbitrary decisions taken by commanders and planners to impose restrictions on support personnel for deployments. A prime example of

²⁸ Department of National Defence, *Military Gazette*, (Ottawa: 1906): quoted in Arnold Warren, *Wait for the Waggon : The Story of the Royal Canadian Army Service Corps* (Canada: McClelland and Stewart Limited, 1961), 35.

²⁹ Defence, *Logistics Branch Handbook...*, Sect. 303.

³⁰ *Ibid.*, Sect. 303.

³¹ Irwin, *Canadian Forces Transformation...*, 26.

this type of decision making at the highest level occurred in 1976, during the planning of the Canadian contribution to a deployment in Norway, “the CDS, General Dextraze, arbitrarily reduced the logistic component of the force from 1,500 personnel to 150 simply by removing a zero from the established logistic unit number.”³² Much more recently, LCol Conrad experienced a similar situation in August 2005 as he prepared the support plan for Canada’s first Task Force (TF) into Kandahar, Afghanistan. As he was working on the design and resource requirements for the National Support Element (NSE) to effectively meet the needs of the TF, he ran headlong into command decisions made without fully understanding the support implications. “I was shocked early in the Tactical Reconnaissance when my boss came to see me on KAF [Kandahar Air Field] and gave me a firm number for the size of the NSE – not one logistics soldier over three hundred!”³³ The decision was made based on previous smaller operations in Kabul and not on the complexity of providing support over a much wider and more dangerous area such as Kandahar. Despite Conrad’s persistent efforts to demonstrate the need for more personnel,

I was reminded by senior Canadian officers on the brigade staff that the tail [support] could not be permitted to wag the dog [combat forces] on an operation as important as this one. I understood the challenges faced by superiors – my boss’s concern for soldier numbers and the Army Commander’s pressures for long-term force generation. I do not believe, however, that they truly understood mine.³⁴

Even planned deliberate organizational changes within the CF, often overlook the need to develop effective logistics support. On 1 April 2002 the military established a new organization that was to become the champion of learning and centre of excellence for professional

³² Douglas Bland, *Chiefs of Defence: Government and the Unified Command of the Canadian Armed Forces* (Toronto: Canadian Institute of Strategic Studies., 1995), 219.

³³ Conrad, *We Three Hundred...*, 260.

³⁴ *Ibid.*, 260.

development within the CF.³⁵ The Canadian Defence Academy (CDA) was established as a centralized home for all the CF owned training and educational institutions which has grown to include the Royal Military College in Kingston, Royal Military College campus in St Jean, Canadian Forces Leadership and Recruit School, Canadian Forces Support Training Group, Canadian Forces College as well as the Canadian Forces Language School. To provide direction and governance over these institutions the CDA Headquarters (CDA HQ) was formed and based in Kingston, Ontario. Despite the CF's experience and familiarity with requirements and staffing of formation level headquarters, CDA HQ was established with very little logistics support capability. Even today, nine years after its creation, CDA HQ has only a token logistics support staff responsible for the provision of support to the entire CDA Formation as well as the responsibility for integral day to day sustainment support to the HQ of roughly 200 personnel.³⁶

Today more than ever with the change in the scope and intensity of military operations, the improvements in weapons and equipment technology and the complexity of sustaining these operations, the logistics branch needs to actively enhance the CF's appreciation of the value and role of support operations with a view to developing a future generation of leaders whose planning and decisions can account more effectively for logistics requirements. Two key initiatives discussed in the following chapters will facilitate this required fundamental change in CF mentality. The first is the need to restructure the Logistics Branch along environmental lines as a means of dispelling the myths and misconceptions fostered by the current management construct. The second initiative encompasses both the requirement to improve the CF's understanding of the fundamentals of logistics support and ensures that logistics personnel and

³⁵ Department of National Defence, "CDA Backgrounder," <http://www.cda-acd.forces.gc.ca/au-ns/bac-doc/index-eng.asp> Internet; accessed 15 November 2011.

³⁶ Author's personal experience in 4 years as the J4 Logistics at CDA HQ.

processes effectively meet the requirements of today's operational environment. The development and institutionalization of relevant support doctrine and training is vital to the provision of logistics operations and will provide the CF leadership with a better appreciation of support challenges in the changing battlespace. These initiatives require the CF leadership to take an active interest in the role, health and capability of our valuable logistics resources. As an outsider looking into the organization writer Christie Blatchford offers the following observation, "Arguably no branch of the Canadian Forces (CF) suffered more than logistics during what former Chief of Defence Staff General Rick Hillier used to call "the decade of darkness," when slashing budgets and numbers were the order of the day. Certainly, no other arm of the forces went so unappreciated, even by those who ought to have known better."³⁷ One of the keys to improving the CF's understanding of the Logistics Branch is providing the military with a more accurate picture of the capabilities and anomalies of the organization and removing some of the generally held misconceptions about the so called "purple" trades. The next chapter will examine some of the significant concerns resulting from the existing logistics management structure.

³⁷ Christie Blatchford, "Foreword," in Lieutenant- Colonel John Conrad, *What the Thunder Said: Reflections of a Canadian Officer in Kandahar* (Toronto: Dundurn Press, 2009), 9.

CHAPTER 2: LOGISTICS BRANCH MYTHS AND PERCEPTIONS – TIME TO BREAK IT UP

The Logistics Branch is visibly one of the largest organizations within the Canadian Forces (CF) support community. In the CF the term support encompasses a wide range of capabilities including Medical and Dental, Chaplains, Legal, Musicians, Personnel Selection, Social Worker and Training Development, as well as the many sub specialties within the Logistics framework. Together these support entities provide the CF with the resources and assistance required to conduct operations here in Canada, as well as the ability to project and sustain its military forces on international operations around the globe. However, because of the number of different occupations nested within the Logistics Branch it is also one of the most diverse organizations in the military. Grouping all of the logistics personnel from all three environments into a single branch fosters a number of misconceptions among the other arms of the CF. Some of these mistaken beliefs include the myth of tri-service interoperability, the perception that logistics is a single function and that the Logistics Branch houses a wealthy resource pool in comparison to some of the other CF branches, and further minimizing the importance of logistics is the existing cumbersome career management structure which portrays logistics as merely a sub-set of another ad hoc grouping referred to as “support”. These current structures and the lack of direct hands on involvement of the army, navy and air force in the management of their specific logistics resources contribute to a general lack of understanding and appreciation for the complexities of logistics support and the day to day effort these components put forth in support of Canada’s national and international defence objectives.

At first glance the idea of one branch in the military responsible for all logistics matters including doctrine, training and personnel management, appears to be a rational and efficient

approach for a rather small military constrained by funding and manning restrictions. By combining all logisticians into a single branch the CF should be able to maximize their common skills and training to develop personnel resources that are functionally interoperable. It doesn't take much investigation, however, to recognize that there are some considerable complications with a unified approach to logistics when providing support to a tri-service military.

THE INTEROPERABILITY MYTH

The first area of concern and likely the most obvious is the myth that all loggies are purple and can be employed effectively in any environment regardless of the colour of their uniform. While the basic technical concepts for providing support to military units on operations are fundamentally the same across the army, navy and air force, the operational environments and working conditions differ considerably and have a significant effect on the way logistics operations are carried out. The army, for instance, with its ground based operations can find itself deployed to the most remote corners of the world and army logisticians must be prepared for all environments from deserts to mountains, jungles to urban areas and threat conditions from peacekeeping to full scale combat. The size and construct of the army's logistics organizations are dependent on the force to be supported, the resources available in the operational area and the accessibility of additional support from Canada. Logistics personnel tasked to support army operations require a significant level of individual combat and survival skills that can only be effectively developed over the course of a land logistician's career. The lines of support communications on army operations are often stretched beyond their doctrinal limits and day to day activities are hampered by constant enemy threats to personnel and equipment.

The air force is also often deployed around the globe but the operational environment is generally more stable due to the aircraft's vulnerability on the ground and the inherent need for secure infrastructure to support the aircraft's vital requirements such as crew rest, specialized fuel and maintenance. As a result the threat level is often lower for the logistician supporting air operations and the availability of resources both locally and direct from Canada are more assured. The skills and training required by logisticians to effectively support air operations are significantly different than those required to support the army's operations.

In contrast to the other two environments the navy's support requirements are for the most part constant and predictable regardless of where they are deployed in the world. Naval ships deploy as self-contained units with a fixed organization, fully stocked shelves, and with a few possible exceptions such as ammunition, their logisticians can predict the support requirements on a daily basis. While the technical skills required by a supply technician to order a part may be the same across the army, navy and air force, it is the operational environment itself that creates the need for very different often life saving skills that cannot be trained in time for a deployment but rather must be acquired over time as an individual grows up in one of the three CF environments. The combat skills required by land logistics personnel to operate effectively in support of land operations are very different than those required by a sea logistics member to participate as part of a ship's company where everyone has to be trained in secondary duties such as fire fighter, boarding party and ships diver. The acquisition of these environment specific skills enables the logistics personnel to function as an integral part of a unit and not just a specialist along for the ride.

In his Task Force Afghanistan Post Operation Report, LCol Horlock indicates that the environmental interoperability myth is alive at the highest levels of the CF and demonstrates the

serious implications that decisions made based on this misconception can have at the operational level. “During Phase 1, Warning, the Chief of Defence Staff (CDS) declared that Roto 5 NSE would be force generated from across the Canadian Forces (CF) and forced all elements and Commands to provide soldiers, sailors, and airmen to the NSE.”³⁸ With 300 of his 450 member NSE generated from units across the country, “... there were significant and varying discrepancies in the levels of training and capability of force generated soldiers....As a result, the training phase for Roto 5 NSE was necessarily longer than normal.”³⁹ The training for the NSE was prolonged in order to ensure that all members of the organization were effectively trained to a level identified by the army as necessary for deployment on land based operations. “It is a challenge for members generated from non-land force bases to arrive with the required level of individual training; it is simply not offered on some non-land force bases. Many augmentees arrived with little appreciation for CSS operations...”⁴⁰

The single branch structure is still staunchly defended by many who claim that all logisticians are in fact interoperable and any logistician can be employed in any environment because their technical skills are the same. Those are the same people who fail to understand the fundamental differences in the environmental skills required to conduct logistics operations in three very different operational environments. Deploying logistics personnel to fill positions across environments lengthens the duration of pre-deployment training and increases the likelihood of serious injury or death as these personnel strive to carry out their duties in unfamiliar and increasingly dangerous operational theatres. In reality the interoperability argument does not recognize the significant environmental training and individual skills

³⁸ Horlock, *Post Operation Report...*, 1.

³⁹ *Ibid.*, 2.

⁴⁰ *Ibid.*, 7.

development required for logistics specialists to operate in their assigned environment and the considerable cost and effort involved in cross training these individuals to fill positions in another environment. A better appreciation of these specialized skills and training could be achieved if the branch's resources were divided along the three environmental lines with each commander given responsibility for that portion of the branch's resources. Giving the ECS (Environmental Chiefs of Staff) the responsibility for their own logistics support in the same way that they manage their own combat and maintenance resources would force them to learn more about their support component and ensure that logisticians would receive the training and skills development required to survive in their assigned environment. Environmental ownership of logistics resources would inhibit the current practice of tasking across environments which send untrained specialists into theatres like Afghanistan where inexperience can be fatal.

A COMPLEX TARGET

Similar to the misconception about logistics interoperability, the size and construct of the logistics branch make it appear to be an extremely large homogeneous pool of resources ready and waiting to take on any and all support tasks. To the uneducated outsider, the wealth of personnel resources residing under a single cap badge signifies a disproportionate allocation of resources in favour of support over any single combat capability. What the logistics cap badge does not effectively portray is the depth of specialization within the branch and the percentage of day to day life support tasks that are managed in garrison and on operations by this single pool of resources. A better understanding of the complex nature of the branch can be achieved by examining the many different trades or occupations that currently exist within the organization.

At the present time the logistics branch consists of eight sub and specialist⁴¹ occupations for officers and seven different occupations for non-commissioned members.⁴² The officer corps assigns first an environmental distinction of army, air force or navy to its logistics officers and from there the corps is further broken into sub occupations such as supply, transport, human resources, finance or food services. Further training and specialization will also produce postal, movements and ammunition technical officers. If the branch was divided into its sub and speciality occupations it would be readily apparent that despite the perception of a wealth of resources, the actual numbers of personnel available within each group is extremely limited. For instance the regular force logistics officer corps from Second Lieutenant to Lieutenant Colonel have a membership of approximately 1500 personnel and while this appears to be a rather large group of logistics officers, further examination would reveal that this number is actually subdivided to provide eight completely different areas of support to the CF.⁴³ For the non-commissioned members (NCM), once assigned to one of the three environments they are then further trained in one of the logistics occupations which include cooks, mobile support equipment operators, postal clerks, resource management support clerks, supply technicians, traffic technicians and ammunition technicians. Adding all these occupations together the logistics branch NCM corps full time strength is approximately 9367 personnel.⁴⁴ With a

⁴¹ Within the Logistics Branch the sub-occupations divide the personnel into different technical areas of competency such as supply and transportation which require significantly different training and processes. Additionally within some of the sub-occupations are further areas of specialization. For instance within the supply occupation specialized training can produce an ammunition specialist whose role is focused on the management, storage and disposal of only ammunition.

⁴² Department of National Defence, “Director General Military Careers” website, http://hr.ottawa-hull.mil.ca/dgmc/engraph/DGMC_DMILC_Intro_e.asp; DND Intranet; accessed 27 May 2011.

⁴³ Department of National Defence, “Director General Military Careers: Logistics Career Manager Briefings”, <http://hr.ottawa-hull.mil.ca/dgmc/docs/moc/brfsgs.ppt>.

⁴⁴ Department of National Defence, “Director General Military Careers: Logistics..., briefings.

current CF Manning of around 68,000⁴⁵ the logistics branch makes up almost 16% of the military's strength with members scattered across the country and overseas supporting the army, navy and air force's operations. The current branch structure falsely portrays logistics as a single organization and does not effectively represent the tri-service support capability or the complex level of specialized support provided to the CF domestically and on operations. Division of the branch along environmental lines and would force the ECS to conduct a comparison of logistics resources against their identified support tasks and enable them to see that in some areas they are actually short of logistics personnel. Giving the responsibility for management of their assigned portion of logistics support would provide the ECS with a better appreciation of the limited resources they actually have to take on the wide variety of support roles required. As if the Logistics Branch was not complicated enough with all its occupations and environments lumped together under a single cap badge, a brief overview of the existing Career Management (CM) structure provides an additional argument for redefining the branch structure.

IMPROVING CAREER MANAGEMENT

A third and perhaps most disheartening factor that complicates the management of the logistics branch can be seen in the structure of the CF Career Management organization better known as Director General Military Careers (DGMCC). It is at this national or strategic level that the lack of understanding of the size and complexity of the logistics branch becomes most readily apparent as the individual management of each of the 10,867⁴⁶ logistics personnel careers

⁴⁵ Department of National Defence, "Backgrounder: Recruiting and Retention in the Canadian Forces, BG 11.007- May 27, 2011; <http://www.forces.gc.ca/site/news-nouvelles/news-nouvelles-eng.asp?id=3792>; Internet; accessed 1 June 2011.

⁴⁶ Department of National Defence, "Director General Military Careers: Logistics..., briefings.

is lumped together with the careers of a number of other branches in a Director Military Careers (D Mil C) section defined as “Support.” The role of D Mil C is to effectively balance the requirements of the CF with the needs and desires of each member and;

The objective of career management is to “*meet the needs of the service*” by ensuring career development and progression from the apprentice level to the highest level of potential development of the individual, through controlled postings and courses designed to increase professional knowledge, experience and scope of responsibility⁴⁷

With the objective of career management in mind it is easy to see how difficult it would be to plan and follow the occupational requirements and development of the many officers and NCMs in the logistics branch alone. To further complicate matters, the management of logistics careers is done by the same people who also manage the careers of the Chaplains, Health Care Administrators, Health Services Officers, Pharmacists, Medical Officers, Bioscience Officers, Biomedical Electronics Technologists, Legal Officers, Personnel Selection Officers, Musicians, Training Development Officers, Physiotherapists, Dental Officers and Technicians, Nurses, Social Work Officers and Medical Technicians. In addition this section, D Mil C 6 (Support), is also now responsible for the careers of the retained CF veterans under the category of Ill and Injured. With a staff of 26 career managers and two administrative assistants,⁴⁸ D Mil C 6 has been charged with the responsibility to manage the careers of personnel in 32 different military occupations or trades and across three environments. By comparison the Army’s career manager shop D Mil C 3 with 25 career managers is responsible for

⁴⁷ Department of National Defence, “Director General Military Careers: Logistics...”, briefings.

⁴⁸ Department of National Defence, “Director General Military Careers: Organizational Contact List – D MIL C 6 (SUPPORT)” website, http://hr.ottawa-hull.mil.ca/dgmc/engraph/listbyorg_e.asp ; DND Intranet; accessed 27 May 2011.

22,000 personnel but only 16 all land based occupations.⁴⁹ While D Mil C 4 with a staff of 21 has roughly 17 air force occupations to contend with. The apparent imbalance in resources applied to the career management of the support occupations including logistics, is indicative of a much greater systemic lack of understanding and appreciation for the contribution and effort required by the support community to effectively sustain the Canadian military and manage the expectations of the three environmental commanders.⁵⁰ The current state of the logistics CM structure furthers the argument for branch restructuring and that logistics personnel would be better served by a system of environmental career management with the logistics organization retaining responsibility for logistics technical and specialist skills development and the development and delivery of quality logistics doctrine.

The process of Logistics Branch transformation will need to focus on significant changes to the existing organization and management structures in order to provide the CF's future leadership with a better appreciation of the capabilities and effective employment of logistics assets in support of future operations. Division of the branch along environmental lines will instil an element of interest and ownership at the environmental level and increase the effectiveness of logistics career management within the army, navy and air force. Spreading the responsibility for logistics management

⁴⁹ Department of National Defence, "Director Military Careers (D Mil C) 3: Army," Briefing to Army G1 Conference; Ottawa; 8 November 2011.

⁵⁰ Evidence of the lack of understanding and concern for support issues were demonstrated by D Mil C 3 during his briefing to the Army G1 Conference, in Ottawa; 8 November 2011. When asked about the level of cooperation and interaction between his office and the D Mil C 6 Support with regard to the competing manning priorities of the Army, Air Force and Navy; his response was that there should be no problems because DGMC and D Mil C 6 were both Army Officers and that both the Air and Naval operations started and ended on the ground, it was only natural that the Army Commander's priorities should override the others.

across the environments would also facilitate the development of necessary relevant logistics support doctrine and training.

CHAPTER 3: LOGISTICS TRAINING AND DOCTRINE – RELEVANCE CHECK

LOGISTICS TRAINING – FALLING BEHIND

One of the more visible signs of the logistics branch management burden and the battle for resources and recognition is that the branch has lacked the ability to focus resources on maintaining current and relevant training. While an in-depth study of all CF Logistics courses may uncover numerous incidents of irrelevant and outdated training, for the purposes of this paper a brief look at some of the existing Logistics Officer Qualification Standards will suffice to demonstrate the need to update logistics training, especially in the areas of joint and combined operations and contracting for support.

Today's global situation finds Canada's military forces involved in operations as part of a larger force made up of UN, NATO or other allied partnerships. In addition these deployed operations often bring together elements of various nations' ground, air and naval capabilities to create a more complete and powerful effect. The concept of bringing together resources from the different environments in any capacity has been given the term "joint" while the cooperative approach which sees different nations' militaries working together has been termed "combined." These terms are defined by NATO as:

combined

Adjective used to describe activities, operations and organisations in which elements of more than one nation participate. *See also multinational.*⁵¹

joint

Adjective used to describe activities, operations, organisations in which elements of at least two services participate.⁵²

⁵¹ North Atlantic Treaty Organization, *AJP-01(D), Allied Joint Doctrine* (NATO Standardization Agency, 21 December 2010), Lexicon-6.

⁵² North Atlantic Treaty Organization, *AJP-01(D)*..., Lexicon-9.

Canada's military resources currently deploy as force packages specifically tailored for operations that range from joint to combined, or both joint and combined which is a significant change from the large scale environmentally focused operations conducted during earlier conflicts and which provided the training focus throughout the Cold War period. The Logistics Officer Common Course (LOCC)⁵³ provides CF logistics officers with a basic understanding of the breadth of responsibilities they will assume in their future employment with a focus on the administrative tasks and only touches deployed operations briefly in terms of roles of Canadian organizations, and phases of an operation. At the next level where this training breaks off into environmentally specific logistics courses, neither the Logistics Officer Common Land (LOCL)⁵⁴, the Logistics Officer Common Air (LOCA)⁵⁵ nor the Logistics Officer Common Sea (LOCS)⁵⁶ address any aspect of joint or combined operations whatsoever. All training at this level is focused internally on the provision of support to each environmental stovepipe and lacking any relation to the larger operational reality. With the current tempo of operations it is often the junior officers who are being deployed on joint and combined missions, with little to no understanding of the complexities or processes involved in working support issues across environments or between coalition partners. It is not until the Logistics Officers return to school as Majors on the Advanced Logistics Officer Course (ALOC) that the army, air force and navy logisticians come back together to exchange experiences and discuss cross environmental issues. By that point in their careers many of these officers have already deployed on operations and learned through experience, lessons on joint and combined operations that should have come

⁵³ Canadian Defence Academy, A-P1-328-D02/PC-H01 *Qualification Standard: Logistics Officer Common (AILJ) Course* (Kingston: Canadian Defence Academy, 12 March 2009).

⁵⁴ Canadian Defence Academy, A-P1-328-D03/PC-H01 *Qualification Standard: Logistics Officer Land (AILL)* (Kingston: Canadian Defence Academy, 23 March 2009).

⁵⁵ Canadian Forces Support Training Group, *Air Logistics: Air Phase 4* (Borden: Canadian Forces Support Training Group, 27 March 2002).

⁵⁶ Canadian Defence Academy, *Qualification Standard: Logistics Officers Course Phase IV – Sea (AILK)* (Kingston: Canadian Defence Academy, 31 July 2008).

from earlier training. Given the current global situation and the trend towards coalition military ventures it reduces the likelihood that junior logistics officers will ever deploy in support of a traditional Canadian centric single environment operation. Today's operational environment is becoming more interdependent and interoperable with land, sea and air elements from different nations working together to support one another and the mission. In order to properly prepare logisticians to work effectively in this environment the branch needs to ensure that logistics training accurately reflects the realities of the joint and combined nature of CF operations. As Irwin rightly points out in his discussion on the need for logistics transformation, "In addition to the imperative of meeting the demands of combined operations, support must be increasingly joint at the operational level."⁵⁷ CF logisticians, regardless of their army, navy or air force background, need a common understanding of the peculiarities of supporting Canada's different elements and the intricacies of providing that support as part of a multinational or joint partnership. Training provided to CF logisticians at the earliest level needs to be relevant to current operations, reflect the realities of joint and combined missions and address areas of significant change such as the employment and management of civilian contractors in theatre support roles.

Since Canada's involvement in the former republic of Yugoslavia in the early 1990's there has been an increasing requirement to do more with less resources and the CF's logistics community, like many of its allies, has come to realize the value of contracting additional capabilities to meet both operational and domestic military requirements. Establishing and managing contracts has become a large part of the logistician's daily responsibilities and consumes millions of CF budget dollars annually. Yet despite the increasing reliance on

⁵⁷ Irwin, *Canadian Forces Transformation ...*, 65.

contracts the majority of the CF logistics officers are not trained for this responsibility and lack the experience with contracting policies and regulations required to effectively advise and guide others through the processes. At present there is very little contract training in the keystone logistics officers' courses discussed above and although there are civilian courses available they are not readily accessible when required. Although the CF has made attempts to provide contract training to personnel preparing for deployments, the logistics branch has recognized that this method of managing the training requirement is not appropriate for such a complex subject as contracting. "Contract and Procurement Training....regarding subj trg in support of deployed ops, just in time training not appropriate for this subject....LBI [Logistics Branch Integrator] conducting a review of basic contracting/procurement needs and resources available to address these needs...."⁵⁸ This realization reflects LCol Horlock's earlier observation in a post operational report on his tour in Afghanistan when he indicates that, "An aspect of Phase 4 that is difficult in which to do any predeployment training, but that is ultimately critical to the success of the mission is the use of contractors."⁵⁹ Horlock's statement underpins both the growing dependence on in-theatre contract support as well as the need to effectively train to manage this capability.

Although joint/combined operations and contract training have been singled out here as examples of the need to update logistics officer training, they are also indicative of the significant change that CF operations have experienced in the last two decades and the need for this change to be reflected in all levels of logistics training. The logistics branch must find a

⁵⁸ Logistics Branch Advisory Council. *Record of Discussion*, RDIMS #1389093 (Ottawa, ON, 12 July 2009), 2.

⁵⁹ Horlock, *Post Operation Report (POR)*..., 3.

way to invest the resources and time required to develop more relevant and modern training for its personnel, training that needs to be grounded in effective and pertinent support doctrine.

REVISING OPERATIONAL SUPPORT DOCTRINE

One of the key reasons for the current state of logistics training is the lack of relevant doctrine that accurately reflects the nature of today's joint operational environment. It is doctrine that provides the foundation for all training objectives and standards, and doctrine changes that drive the need for change within the training system. Without up to date doctrine the training system is severely hampered in its ability deliver relevant and effective logistics training at all levels. This section will discuss the current state of the Army's logistics or CSS doctrine in relation to that of the CF in general, explore some proposed areas for improvement and change to CSS doctrine and briefly discuss the concept of joint doctrine development and some of the impediments we share with the U.S. as we strive to understand the doctrinal concepts of "joint" and "interoperability".

State of CSS Doctrine

In his 2004 article for the Canadian Military Journal, Brigadier-General Nordick accurately depicted the unfortunate state of CF logistics doctrine and the dilemma facing our CSS personnel with the advent of each new mission and theatre of operation.

We have no strategic Combat Service Support doctrine. So the national service support structure for overseas operations, from first line to the national lines of Communication, must be created from first principles every time we deploy.⁶⁰

⁶⁰ Brigadier-General G.W. Nordick, "Can the CF Develop Viable National Joint Capabilities?" Canadian Military Journal Vol 5, No. 2 (Summer 2004): 63; <http://www.journal.dnd.ca/vo5/no2/views-vues-eng.asp>; Internet; accessed 16 June 2011.

For the last two decades the logistics planners at the strategic level have approached each new mission with an empty slate and based on collective experience have designed multi-layered, theatre specific support structures to ensure front line troops received the supplies required to meet their operational needs. Our ability to create successful support structures for these CF missions with limited doctrinal assistance is a testament to the creativity, determination and technical competence of logistics personnel as well as their readiness to find inventive solutions. Unfortunately there is a significant cost in terms of time, manpower, funding and equipment in the establishment of each new tailor made support structure which would be reduced if planners could speed up their decision cycle and utilize relevant doctrine and established processes as a starting point. As each annual posting cycle swaps out the veteran planners with new personnel and the experience gained, lessons learned and processes developed by the previous logistic planners often remains locked in their minds as they head to new units, with very little recorded for future reference. Instead of capitalizing on the lessons learned and work already accomplished from the last mission, the new logistic planners once again start from scratch crunching similar numbers, stewing over expensive support options and building yet another task tailored support structure for the next mission. Through a concerted effort to develop logistics doctrine, this information should be captured, tested, refined and made accessible to others. For it is doctrine that provides the “fundamental principles by which the military forces guide their actions in support of objectives....doctrine describes the factors to be considered and provides the specifics for planning and executing military operations and activities.”⁶¹ Without a solid doctrinal record, our experience will move on and retire, we will

⁶¹ Department of National Defence, A-GJ-025-0A1/FP-001 *CFJP A1: Doctrine Development Manual* (Ottawa: Canadian Forces Experimentation Centre, Joint Doctrine Branch, 2010-01), 1.

be unable to synchronize our training with the operational requirements and new logisticians will find themselves unwittingly rediscovering old costly and potentially painful lessons.

There is some comfort in understanding that the current state of support doctrine is not a cause but a symptom of a larger CF level problem. In reality the entire CF suffers from a lack of current and relevant doctrine, as indicated in the March 2007 Chief Review Services (CRS) Report, *Evaluation of the Maintenance and Currency of CF Doctrine*. The overall assessment from that report states that “Doctrine development above the tactical level has not kept pace with recent changes to the CF command and control architecture and new capabilities....Remedial action is urgently required to ensure that current deficiencies do not negatively influence the achievement of military objectives.”⁶² The CRS Report points out that current CF doctrine appears to be stuck in the quagmire of World War II operations, and despite the incredible changes to the global security environment and the many attempts at internal CF reorganization, our leadership has done very little to ensure that doctrine has kept up with the change. Strategic concern over the apparently systemic lack of attention to doctrine development resulted in the request for CRS to assist in redirecting the senior leadership’s focus on the need and value of CF doctrine development. “This evaluation [of the currency of CF doctrine] was included in the CRS Work Plan as a result of concerns that CF senior leadership was gradually losing sight of its role in doctrine development and related processes.”⁶³ Two of the report’s recommendations included the creation of a doctrine steering committee and efforts to improve the awareness among CF Officers of the need to maintain current doctrine. Doctrine development is a command responsibility and as such, doctrine change needs to be initiated from the top. The

⁶² Department of National Defence, *CRS Report: Evaluation of the Maintenance and Currency of CF Doctrine* (Ottawa: Chief Review Services, March 2007), iii.

⁶³ CRS Report, *Evaluation of the Maintenance and Currency of CF Doctrine*, 1.

CRS report highlighted the requirement for strategic direction to the CF when it noted, “There is currently no “capstone” doctrine publication for the CF...to provide the highest level of approved direction to the military...”⁶⁴ This need for strategic direction fully support’s General Nordick’s earlier remarks on the importance of top down, CF doctrine. “Keystone national doctrine must drive environmental [and support] doctrine, which in turn, drives what is taught in CF institutions.”⁶⁵

Having examined the need to update CF doctrine, a closer look at the various levels of doctrine will provide a better understanding of where support doctrine fits into the picture. Perhaps in response to the CRS report, but definitely a start towards improving the state of CF doctrine is the newly released 2010, CF publication *CFJP A1: Doctrine Development Manual*. This manual provides guidance and direction on how to turn experience and lessons learned into sound and useful publications that link effectively with other sections of military doctrine and that of our closest allies. For Canadian purposes the “expression “CF doctrine” encompasses doctrine written for all three levels of military activities—strategic, operational, and tactical.”⁶⁶ In logistics terms this indicates a requirement to have doctrine established at all three levels as well; strategic logistics doctrine would support the link from Canada to the theatre of operations, operational logistics doctrine would cover the support within the theatre of operations and tactical logistics doctrine would cover the more immediate support provided to front line troops. Colonel Charles Davies provides a more detailed description of the three levels of logistics support under the term sustainment;

... sustainment is delivered in three domains. The first is provision from fixed infrastructure, of national and local support to permanently based forces. The

⁶⁴ *Ibid.*, 8.

⁶⁵ Nordick, *Can the CF Develop...*, 64.

⁶⁶ DND, *CFJP A1: Doctrine Development Manual...*, 1.

second is in-theatre support to deployed forces provided from static and reasonably secure locations, often using adapted facilities. The third is support to mobile combat operations, usually in austere conditions.”⁶⁷

Tactical logistics or support to mobile combat operations is most commonly associated with land based or army operations and recognized within the army terminology as an element of Combat Service Support (CSS). The recent changes to the operational environment have drastically altered the way the CF conducts its operations. For the Army’s CSS organizations, these changes have resulted in support operations that are significantly different than the established operational and tactical doctrine would describe.

Up until the end of the Cold War it would have been very difficult to determine exactly how out of date our support doctrine had become. Until we witnessed the significant shift in the global security environment and the advent of peace support operations, the CF had very little opportunity or reason to question the relevance and validity of its existing doctrine. Newly minted logistics officers arriving on the Service Battalion scene in 1989⁶⁸ were trained in CSS doctrine based on a linear battlefield with a clearly identified front or FEBA (Forward Edge of the Battle Area) where our forces would engage the opposition, and as far back as possible a less dangerous, administrative Rear Area where the vast majority of the logistics support resources would reside. Between the Rear and FEBA was the increasingly dangerous (the closer you got to the front) combat zone where the majority of the replenishment (resupply) tasks would take place. As Davies explains this doctrine was created from experience, to suit a specific theatre and support our forces in the event of another war against a specific enemy.

The underlying concepts for this doctrine came from Allied experiences in WWII...” “This wartime experience was tempered by years of planning for

⁶⁷ Davies, *Sustainment Transformation...*, 4.

⁶⁸ Based on the author’s training and experience at the 1 Service Battalion, Calgary in 1988-91.

confrontation with the Soviet Union....Development of the sustainment system was heavily influenced by the fact that there was a known theatre of operations, a known threat and robust fixed infrastructure supporting NATO-assigned forces.⁶⁹

However the world has changed a great deal since that time and our military forces are once again engaged in combat operations, this time against much different opponents, with unpredictable tactics, in operational theatres that do not even remotely resemble the traditional linear battlefield of WWII or Cold War planning. The unprecedented speed, at which the global security environment has changed since the end of the Cold War, has left CF doctrine development struggling to keep up. Since Col Davies paper in 2003, the army has issued an updated version of the CSS doctrine *Land Force Sustainment*, in which the Directorate of Army Doctrine acknowledges the difficulties of providing guidance and direction in light of the diversity of today's land base operations. *Land Force Sustainment* introduces the full spectrum of operations in terms of both contiguous and non-contiguous areas of operation and stresses the fact that regardless of the type of battlefield, the basic principles of the Sustainment System represented by the four sub systems; Material Management and Distribution System (MMDS), Land Equipment Management System (LEMS), Personnel Support Services (PSS) System and Health Service Support (HSS) System would remain unchanged.⁷⁰ How the function of these systems is going to be affected by the operational environment and other external factors such as multinational and civilian developmental partners, has yet to be determined. "The challenge for the sustainment system is to be able to provide support across the full spectrum of operations in increasingly complex areas of operation while involved in multinational operations."⁷¹

⁶⁹ Davies, *Sustainment Transformation...*, 5.

⁷⁰ Department of National Defence, B-GL-300-004/FP-001 *Sustainment of Land Operations* (Ottawa: Chief Land Staff, 2010-12-13), 2-2.

⁷¹ DND, *Sustainment of Land Operations...*, iii.

Over the past two decades we have deployed task tailored forces to operations ranging from benign peacekeeping to deadly combat missions as part of UN, NATO and other coalition ventures. With each deployment came the task of defining the support requirement, a task that would normally be facilitated through reference to existing doctrine. Unfortunately there is very little in the pages of current Canadian sustainment doctrine that would prepare CSS forces to support the counter-insurgency (COIN) combat operations of today. As then Major Conrad points out in his 2004 paper, “The Canadian Army has undergone numerous changes to its structure, doctrine and tactics in the last 85 years. However, attention for doctrine and tactics has not been universally invested in the operational functions of the army and sustainment in particular has been neglected.”⁷² Ironically, less than two years after completing his staff college paper, LCol Conrad was destined to experience first-hand, the difficulties of planning support operations in a doctrinal void. As the commander of the National Support Element (NSE) in Kandahar, LCol Conrad realized that despite the CF’s modernization and advances in technology, the support community was no further ahead than it was in WWI.

What has never ceased to fascinate me and get my blood pumping is that the problem Field Marshal Haig faced in 1916 was similar, though on a much larger scale, to the one that confronted our Canadian Task Force nearly 90 years later in Kandahar; the unknown logistics demands of a new kind of warfare. What ancient truths would we relearn as an army returning to combat?⁷³

RECOMMENDATIONS FOR CHANGE

With the current operational tempo and focus on force generation and support to the sizeable land based operation in Afghanistan, there has been very little opportunity for the logistics

⁷² Conrad, *Wind Without Rain...*, 3.

⁷³ Lieutenant-Colonel John Conrad, *What The Thunder Said: Reflections of a Canadian Officer in Kandahar* (Toronto: Ontario, Dundurn Press, 2009), 119.

leadership to concentrate on the development of new doctrine. When the process is finally kicked into high gear, those entrusted with the role of developing new CSS doctrine are likely to be inundated with doctrine change recommendations from across the country. Determining exactly where to start will be a difficult task. Anticipating this future development activity there have already been a number of valuable observations put forward in documents ranging from service papers, to post operation reports and journal articles. Some of the major areas for consideration include redesigning the CSS operational concepts and terminology for the modern battlespace, requirements for effective integral CSS force protection capabilities, the Combat Logistics Patrol, logistics focused intelligence and when, where and how to effectively utilize contractors in the battlespace.

Operational Support Concepts and Terminology

Perhaps the most obvious difference between CSS sustainment doctrine and today's support operations can be seen in terms of the physical layout of Canada's area of operations (AO) in Afghanistan. As a result of his recent experience with the Canadian NSE in Kandahar, Maj Devon Matsalla explains that the existing doctrinal linear battlefield concept with its echelon system of support is of little use in the current asymmetric battlespace and how the NSEs have adapted their operations to better support the requirements of COIN operations. In his article, *Practical Sustainment Concepts for the Non-Linear Battlespace*,⁷⁴ Matsalla provides a description of the actual operations taking place in Afghanistan in terms of a "sustainment network founded on interdependencies between secure nodes..."⁷⁵ Unlike the linear battlespace the COIN environment does not have a clear front line or safe rear area, "there is no defined

⁷⁴ Matsalla, *Practical Sustainment Concepts...*, 45-62.

⁷⁵ *Ibid.*, 45.

FEBA, as the threat of insurgent activity is present throughout the operational area.”⁷⁶ The fact that CSS troops now live, travel and conduct their operations in a continual threat environment, is a fundamental change from the current doctrine and its concept of the secure rear area, linear front to rear sustainment activities, administrative movement and low threat brigade level administrative areas. Within this COIN non-contiguous battlespace context there are a number of relatively safe areas established and secured by the task force in which various types of static sustainment activities such as vehicle maintenance, medical support and supply warehousing can take place. These are what Matsalla refers to as *nodes* and they are established at different locations within the AO to meet operational requirements, and not in accordance with a doctrinal diagram. The size, infrastructure and security level of each node will determine the type and level of support available in that location. The other feature that Matsalla identifies is that these nodes are interconnected by *links* which permit the sharing of resources between *nodes* and “increases the requirement for coordination between units [which previously operated in linear stovepipes with minimal lateral coordination], suggesting that resources be more centrally controlled.”⁷⁷ These *links* are where the more mobile CSS operations such as transport, recovery and medical evacuation take place and in contrast to the current doctrine, the CSS activities in the *links* are now taking place in the high threat AO. “Sustainment operations within the links have taken on a complexity uncommon to the linear battlefield. Combat service support (CSS) soldiers now have to brave the same combat conditions as manoeuvre elements.”⁷⁸ The conduct of CSS operations in a COIN environment with a significantly increased threat level warrants serious consideration in terms of future doctrine development.

⁷⁶ *Ibid.*, 47.

⁷⁷ *Ibid.*, 49.

⁷⁸ *Ibid.*, 49.

In support of Matsalla's proposal for a construct based on *nodes* and *links* in a non-contiguous rather than linear context; Vincent Curtis takes this argument a step further suggesting that the key to effective and durable doctrine is in the selection of terminology. Curtis suggests that the terminology chosen to describe where CSS activities take place, should be generic enough to avoid being tied to any one type of operational construct thus providing more flexibility to CSS doctrine and allowing it to adapt to missions in the full spectrum of operations. "I agree with [Matsalla's concluding]... statement and offer here a set of fundamental concepts upon which a hierarchy of sustainment doctrine can be developed which is independent of theatre geometry, or at least upon which theatre geometry is a particular variable."⁷⁹ Instead of *nodes* and *links*, Curtis is suggesting more theoretical terms such as *place* and *between* which he explains are completely without reference to any particular shape or type of theatre. He then uses his generic terminology to describe Matsalla's CSS activities in any theatre of operations.

Under the category of Place, we can be put the theatre itself, the port of disembarkation, bases, support areas, delivery points, commodity points, strong points, camps, etc. In these Places, support services are performed as per normal doctrine.

Since the purpose of logistics is to move supplies from one Place to another, the fundamental problem of logistics can be posed as: to move a freight of a certain quality in a certain quantity from one place to another in a certain period of time. Since the Places are not in physical contact with each other (i.e. they are not "contiguous"), the freight has to be moved through the Between. Some of the problems of the movement of freight in a theatre are closely associated with the Between. Pertinent qualities of the Between include the quality of the road, the weather conditions, and the tactical situation.⁸⁰

⁷⁹ Vincent J. Curtis, "Place and Between: A Fundamental Look at Sustainment Concepts," *Canadian Army Journal* Vol.12.1 (Spring 2009), 152.

⁸⁰ Curtis, *Place and Between...*, 151.

Like Matsalla, Curtis recognizes the characteristics of the area outside of the *places* or *nodes* as the main variable in today's operations. While the tactical level static activities and processes conducted by CSS personnel generally remain the same wherever they are set up, it is the geography of the theatre and the threat level throughout the *between* that will determine the capability of each *place* and the overall design of the support structure. New CSS doctrine needs to move away from the linear battlefield context and be flexible enough to apply to the full spectrum of operations now and in the future. By selecting abstract terminology in doctrine development, the CF can prevent doctrine from becoming outdated as it will not be tied to any specific type of operation or theatre, thus facilitating the development of doctrine that can adapt as missions change. The biggest challenge to CSS doctrine development will be in how to effectively and safely conduct the activities that take place in the *between* and issues such as security and force protection.

Force Protection

A second major area for consideration in the development of updated CSS doctrine is the need for support personnel to be capable of effectively dealing with the threats that are now present throughout the battlespace. The need for force protection skills and capability have always been included in CSS doctrine with an emphasis on the defence using "passive countermeasures"⁸¹ and, as the current doctrine manual suggests, dependence on combat forces to come to the rescue of CSS units under attack. "In the event of ground attack, CSS elements must be prepared to defend their location until outside assistance has arrived or the threat is defeated."⁸² While current doctrine does identify the requirement for CSS personnel to defend the established safe *places* from enemy attack, it does not discuss the level of combat skills and

⁸¹ National Defence, *B-GL-300-004/FP-001, Sustainment...*, 1-8.

⁸² *Ibid.*, 1-9.

capabilities necessary for the conduct of mobile CSS activities in the high threat *between* of today's operational theatre. LCol Tim Marcella's article *Force Protection for Logistics: Lessons and Recommendations for the Asymmetric Environment*,⁸³ examines the changing operational environment and the need for increased force protection skills and capabilities for logistic operations. Marcella raises a number of areas of concern based on our current logistics doctrine and combat operational practices. While the asymmetric threat and attacks on our weaker units and support links have always been a possibility; "The reality is the asymmetric threat to logistics units and facilities has increased significantly in the modern battlespace, and they present more likely targets than well armed combat units."⁸⁴ With the existing threats of Improvised Explosive Devices (IEDs), suicide bombers and ambush tactics aimed at moving vehicles and convoys throughout Afghanistan, the likelihood that lightly defended CSS mobile operations will become targets has increased substantially. Add to that, the demoralizing effect of disrupting an opponent's support life line, and the value of effective attacks against CSS units and vehicles becomes even more apparent. Current doctrine does acknowledge that "...the requirement exists for CSS soldiers to be able to conduct both offensive and defensive combat operations."⁸⁵ But the doctrine does not explore that stream any further as the common practice within the CF land forces is that CSS units will be provided with force protection assistance from the combat arms when required. Marcella argues that there is a definite need for CSS personnel to be trained and properly equipped for combat roles in order to effectively protect themselves and reduce the dependency on combat arms support.

⁸³ Lieutenant-Colonel Tim D. Marcella, "Force Protection For Logistics: Lessons and Recommendations For the Asymmetric Environment." *Canadian Army Journal* Vol.9.2 (Summer 2006), 60-69.

⁸⁴ Marcella, *Force Protection For Logistics...*, 61.

⁸⁵ National Defence, *B-GL-300-004/FP-001, Sustainment...*, 1-9.

Experience has demonstrated that combat units will frequently be forced to leave their LOCs [lines of communication or support] unsecured as combat arms and support arms units will always be tasked with other priorities. CSS units must be capable of conducting convoy operations and base defence against the asymmetric threat without external assistance.⁸⁶

Along with combat training for CSS personnel to provide them with the requisite skills and practice, Marcella's argument convincingly suggests that logistics units require some of the same weapons and vehicles as the combat arms, to develop their own dedicated force protection capability. "This requirement for robust integral force protection for logistics units and activities requires not only the mounting of weapons on logistics vehicles, but actually providing CSS units with platforms dedicated solely to force protection tasks on a permanent basis."⁸⁷ The provision of limited and high value combat resources to CSS units would likely meet with some resistance from the combat arms community as these vehicles and equipment were intended for use by the combat fighting forces, are in high demand for operations and limited in number due to combat damage and budget restrictions.⁸⁸ However, if these resources and effective training were provided to improve the force protection of sustainment operations, it would relieve the combat arms of the heavy burden of CSS force protection and allow them to focus more resources on their primary war fighting tasks. Although traditionally operating in the relatively benign environments, the CSS convoys operating in Afghanistan have had to assume a more combative posture in order to respond to the constant and pervasive threats such as IEDs and ambushes. No longer simply convoys the CSS community have adopted the term combat logistics patrol to describe the significant change to their operations.

⁸⁶ Marcella, *Force Protection For Logistics...*, 62.

⁸⁷ *Ibid.*, 64.

⁸⁸ Author's personal experience and opinions garnered through numerous discussions with combat arms counterparts.

Combat Logistics Patrol

Related to the concept of integral force protection is the introduction of the Combat Logistics Patrol (CLP) a term that Army logisticians have adopted from our US allies and accurately describes the way our convoy operations and movement in the *between* is being conducted today.

Logisticians on the battlefields of Iraq and Afghanistan must operate using unprecedented and uncharted tactics, techniques, and procedures. They can no longer rely on nonorganic force protection or other emergency response assets when they operate “outside the wire” on austere main supply routes (MSRs). Logistics units, specifically transportation units, must be able to master actions on the objective, force projection, and critical emergency response skills. Effective combat logistics patrols (CLPs) are not just a concept; they have become a way of life for combat service support units. CLP methodology provides the standard for fixing, fueling, arming, moving, and sustaining the force.⁸⁹

Although not yet accepted into Army doctrine⁹⁰, at the tactical level the term CLP is widely used as a means of distinguishing the mobile operations in Afghanistan from the traditional convoy operations of the Cold War era doctrine. Convoy operations were grouped into two main categories, administrative and tactical based on the threat situation and proximity to the FEBA.⁹¹ Administrative convoys were generally large, long, multi-vehicle, daylight moves through the relatively low threat rear area requiring minimal force protection resources. While tactical convoys were much smaller, night time, black out moves forward towards the FEBA in order to provide much needed ammunition and supplies to the combat troops. Tactical convoys were defensive in nature and with minimal force protection they relied on the ability of the CSS

⁸⁹ Major Julian H. Bond, “Combat Logistics Patrol Methodology,” Army Logistician: Professional Bulletin of United States Army Logistics Vol 39, Issue 2 (March-April 2007); http://www.almc.army.mil/alog/issues/Mar-Apr07/patrol_method.htm/; Internet; accessed 9 August 2011.

⁹⁰ Discussions between the author working in the Directorate of Army Training and Directorate of Army Doctrine CSS Desk Officer (DAD 9) in 2006, over the use of the term CLP in future doctrine. At the time there was significant resistance to acknowledge that CSS personnel in Afghanistan were actually conducting combat operations instead of traditional convoy operations.

⁹¹ Based on the author’s training and 23 years of personal experience as an Army Logistics Transportation Officer.

operators to remain undetected by enemy forces throughout their mission. In contrast, the pervasive threat in theatres like Afghanistan has forced the logistics convoy to assume a more proactive stature. As Conrad explains, “By the end of the tour [in Afghanistan summer 2006], most soldiers in this [transport] platoon had served in the neighbourhood of a 100 convoys – many kilometres where every convoy is treated as a combat patrol.”⁹² This change at the tactical level was driven by necessity as a response to the increasing violent attacks by the Taliban against the sustainment convoys operating in the theatre. The experience and reaction was similar the following summer as the task force National Support Element (NSE) attempted to conduct convoy operations in the same area.

In response to the problem, [attacks on the support convoys] the NSE CO...conducted a massive internal reorganization, emphasizing battle procedure, rehearsals, drills and the level of detail that was required in the brief to on-site commanders. It was there that we buried the term “convoy” forever, and adopted the US “combat logistics patrol (CLP)” as the official jargon. The understanding that sustainment operations were now based on the *patrol* required now that the battle procedure and preparation be conducted with the same rigour and detail as for this inherently *manoeuvre* action.⁹³

The terminology and tactics of the CLP have been accepted by the land logistics community and continue to be used to describe the mobile support operations that are taking place in the current battlespace. LCol Kerry Horlock’s Post Operational Report⁹⁴, as the follow on NSE Commander in 2008, makes frequent mention of the CLP and offers additional input in terms of pre-deployment training, security, integral resources and command and control, for the development of this capability within CSS doctrine. Horlock’s report reinforces the new combat focus of CSS mobile operations as a result of experiences in Afghanistan. “The NSE’s

⁹² Conrad, *What The Thunder Said...*, 107.

⁹³ Major D.P. Matsalla, “Sustainment Intelligence in Afghanistan,” *Canadian Army Journal* Vol.11.3 (Fall 2008): 36.

⁹⁴ Horlock, *Post Operation Report*.

manoeuvre elements are task-tailored CPLs, Combat Recovery Patrols (CRP) or Forward Logistics Groups (FLG).”⁹⁵ The CLP and its characteristics appear better suited to today’s non-conventional operational environment and should be included in future versions of CSS doctrine to better prepare and equip support personnel who are now subject to the same threat levels in theatre as the combat arms. In order to operate effectively in theatre the CLPs will require access to intelligence information that is tailored to their specific requirements.

Logistics Intelligence

As a result of the change in the operational environment, the increased threat to support activities and the introduction of the CLP, there is a new requirement for CSS oriented intelligence products. In the traditional linear battlefield concept the intelligence collection and reporting was directed at supporting the combat arms commanders and providing a picture of the enemy’s disposition, actions and future intentions. With the transition to the non-contiguous battlefield and non-traditional tactics, the intelligence gathering and reporting process has become increasingly complex and diverse as resources attempt to gather and process information on activities throughout the AO. Although the intelligence products and reports produced still predominately support the combat arms operations there is an urgent requirement for intelligence reports focused on the needs of the CSS units as they travel extensively and carry out mobile support operations throughout the theatre. In a second article for the Army Journal on Sustainment Intelligence, Matsalla describes the requirement for CSS based intelligence support, the creation of a logistics intelligence position to meet this need and the added benefits of logistics intelligence collection to Task Force operations.

⁹⁵ Horlock, *Post Operation Report...* 17.

The sacrifice of one trucker sergeant position [dedicated intelligence focus S2] within the NSE transport platoon has more than paid off with the creation of a sustainment intelligence capability. We not only increased the awareness, safety and protection of our CLPs, but we integrated the NSE into the overall information-gathering plan, contributing to the awareness and protection of all coalition members.⁹⁶

Having a dedicated intelligence capability that understood the requirements and capabilities of the NSE proved to be invaluable to the planning and safe conduct of support operations. The benefit to the rest of the Task Force was quickly recognized as well, as the CLPs proved to be effective means of gathering useful information on activities along the main supply routes. As a result of their experience in Roto 4, Matsalla recommends that CSS doctrine and future missions include the establishment of this CSS focused intelligence capability. “The current Army doctrine needs to recognize the importance of sustainment intelligence as an essential enabler on the 21st Century battlefield.”⁹⁷ Another critical enabler whose capabilities, value and effects on theatre dynamics are not well understood and should be included in future doctrine revisions is the civilian contractor.

Contractors in the Battlespace

Another significant change to the battlespace dynamic since the end of the Cold War has been the increased presence of civilian personnel working alongside deployed CF and allied military personnel in higher threat land based military operations. Similar to the other systems (MMDS, LEMS, PSS and HSS) the Contractor Capability is a support resource tool that can provide a wide array of services in theatre while minimizing the drain on the commander’s limited military resources. While the use of contractors is not entirely new to the military, the level of support provided by civilian contractors during the CF’s operations in the Balkans and

⁹⁶ Matsalla, *Sustainment Intelligence...*, 41.

⁹⁷ *Ibid.*, 40.

Afghanistan is unprecedented. In the Balkans between September 2000 and September 2003 in order to reduce the military's support troop contribution by 326 soldier per year, the CF paid \$115 million dollars to Atco Frontec for the provision of "...warehousing, transportation, bulk fuel management, vehicle maintenance, food services, communications services, camp maintenance, electricity and water supply and distribution, waste management, facility operation and maintenance, fire services, and environmental protection."⁹⁸ The cost for CANCAP (Canadian Forces Contractor Augmentation Program) to create the two operational camps in Kabul Afghanistan was \$50 million dollars and an additional \$85 million per year was billed to the CF for contractor support each year.⁹⁹ Although a financially expensive option, contracted support has demonstrated itself to be an effective tool in the defence logistics tool box that needs to be incorporated into CSS if not CF level doctrine. At the present time CSS doctrine does recognize the existence of contractors as an alternative means of support on operations, however it provides little in the way of direction or guidance in the planning phase, especially how to determine whether contracting is an effective option and for what services, when to bring the contractors into the planning process and the effect of these contracts on theatre and operational dynamics including resource requirements. One of the areas that needs to be addressed in doctrine is an understanding of the second and third order effects that contracting can have on an operational theatre especially when dealing with local contractors. "Over the last few years, civilian contractors have also been incorporated into the sustainment system for specific

⁹⁸ Department of National Defence, "Backgrounder: Balkans Rationalization – Contract Support Project," BG-00.006a – December 15, 2001, <http://www.forces.gc.ca/site/news-nouvelles/news-nouvelles-eng.asp?cat=03&id-210> Internet: accessed 29 September 2011.

⁹⁹ Department of National Defence, "Backgrounder: Canadian Forces Contractor Augmentation Program," BG-04.010 – July 14, 2004; <http://www.forces.gc.ca/site/news-nouvelles/news-nouvelles-eng.asp?cat=03&id-1409> Internet; accessed 29 September 2011.

missions. Planners must make every effort to incorporate available civilian capabilities into their plans.”¹⁰⁰

The frequency of contracting has increased in the past two decades as a result of military budget cuts, personnel shortages and a significant increase in the CF’s operational tempo. As a result of the 1994 Defence White Paper personnel reductions, and under the belief that combat forces would take longer to generate when required, the decision was taken to “...apportion the most significant force reduction to the support units.”¹⁰¹ With the focus on the recruiting, generation and maintenance of the army’s core combat capabilities to meet operational commitments, the numbers of support personnel have remained significantly lower than Cold War figures to keep the manning levels within the governments’ imposed military personnel ceiling. However the increased operational tempo since the reductions and the continual requirement for support personnel to provide nearly one third of the forces on deployments has seriously taxed the capabilities of CF support community and forced the military into seeking other support options.¹⁰² Thus as David Perry explains “...personnel shortages in the support trades have been the principle driver of logistics services contracting in Canada, and that these shortages have been exacerbated by repeated deployments to Afghanistan....”¹⁰³ Understandably civilian contractors are not viable replacements for combat forces, however they are considered acceptable solutions for support tasks especially those related to the static day to day life support operations. Although not everyone agrees that civilians should be employed alongside soldiers in the military battlespace, it appears that the option for contracting both domestically and for

¹⁰⁰ National Defence, *B-GL-300-004/FP-001, Sustainment...*, 2-8.

¹⁰¹ David Perry, “Contracting Tail to Recruit More Teeth: Privatized Logistics and its Implications for CF Force Posture” (Prepared for the Prairie Political Science Association Annual Convention, Winnipeg, October 2010), 16.

¹⁰² Perry, *Contracting Tail to Recruit More Teeth...*16.

¹⁰³ David Perry, “Contractors in Kandahar, EH?: Canada’s ‘Real’ Commitment to Afghanistan,” *Journal of Military and Strategic Studies*, Vol. 9, Issue 4 (Summer 2007): www.jmss.org/jmss/index.php/jmss/article/download/98/108; Internet; accessed 10 August 2011.

deployed operations is here to stay. Understanding this new capability, factoring it into the planning process, identifying the need for effective contract management skills and appreciating the corollary effects of contracting in a theatre of operations need to be fully integrated into our CSS doctrine. With the potential for millions of dollars to be spent on contracts over the duration of each mission it is imperative that logisticians fully understand the potential effects of establishing contracts in support of military operations. The US Government has conducted a number of investigations into their military's contracting practices and one of the key recommendations that surfaced as a result of these reports is the need for "the development of doctrine and policy on the use of contractors in the battlefield."¹⁰⁴ Here in Canada,

Chief Review Services (CRS) Report [on CF contracting practices]....made recommendations that echoed those made much earlier by American reports, including the need to introduce a policy on the use of contractors, a requirement for improved contracting and auditing practices and the develop [sic] relevant training for the military personnel charged with working with contractors.¹⁰⁵

At the operational level as well there is a recognition that deployed CSS personnel do not fully appreciate the extent to which contracting is integrated into today's sustainment operations.

Horlock describes the extent of the contractor integration in Afghanistan and the complexity of having multiple layers of contracts in operation concurrently.

An aspect of Phase 4 [employment in theatre] that is difficult in which to do any predeployment training, but that is ultimately critical to the success of the mission is the use of contractors. In theatre the NSE...utilizes the services of several different contractors. The Canadian Contractor Assistance Program (CANCAP) provides extremely valuable real life support and construction services....Director General Personnel and Family Support Services...provides the welfare services....over 1000 local national contracted tractor-trailers (Jingle Trucks) [are

¹⁰⁴ *Ibid.*, 6.

¹⁰⁵ *Ibid.*, 21.

contracted] to move non-sensitive stores...[and] local nationals performing skilled and unskilled services throughout the AO.”¹⁰⁶

Concern over the lack of contract doctrine, training and education is also raised in Al Morrow’s article *CANCAP: The Changing Face of Logistic Support to the Canadian Forces*. Morrow’s experience in Land Forces Doctrine and Training System (LFDTS) Directorate of Army Doctrine (DAD) and within the lines at the CANCAP contractor SNC-LAVALIN PAE, have enabled him to see both sides of the contract issue and identify the urgent need to develop doctrine, education and training to facilitate contracting at all levels. The reliance on civilian contracted support has grown faster than expected and “...it would appear that the use of contractors has outpaced education and understanding, creating a gap in the knowledge that may be impinging on the ability to plan for and employ contractors in the most effective manner to support the soldier on the ground.”¹⁰⁷ The development of doctrine and policy for the use of contracts on operations would go a long way to determining the level of training required and specific audiences that would be affected.

A concerted effort to revise the CSS doctrine to the point where it effectively represents the intricacies of sustaining today’s land force requirements, will facilitate the next vital step in doctrine development that being the development of much needed CF joint support doctrine.

JOINT SUPPORT DOCTRINE

At the operational level the lack of joint support doctrine inhibits the cooperation between environments, mutual understanding, sharing of support resources and reduction of redundancies that could improve efficiency and minimize the support footprint in theatre. At the

¹⁰⁶ Horlock, *Post Operation Report*... 3.

¹⁰⁷ Lieutenant-Colonel (ret’d) Al Morrow, “CANCAP: The Changing Face of Logistic Support to the Canadian Forces,” *Canadian Army Journal* Vol. 8.2 (Summer 2005), 75.

start of their careers the majority of support personnel train together in their designated specialty areas (i.e. supply, transportation, food services, finance, medical, dental) at integrated CF level institutions such as Canadian Forces School of Administration and Logistics (CFSAL) and the Canadian Forces Health Services Training Centre (CFHSTC) in Borden. However, once they leave the schools they become environmentally focused and despite the technical commonality of many of the support activities, they remain locked within their environmental stovepipes for the majority of their careers. Even when support organizations are deployed to a theatre of operations they tend to establish their own environmentally focused sustainment structures rather than working together to maximize efficiency and reduce the logistics footprint. The most obvious reason for this lack of cooperation across environments is the absence of overall joint doctrine and policy to bring the pieces together. “To operate jointly overseas, we need to write doctrine and then experiment, train and practise joint operations. The reality is that we have no joint doctrine. We struggle to maintain even the semblance of national joint study in our service schools, and we have a very limited joint capability at our ‘joint’ staff college.”¹⁰⁸ There are a number of factors that contribute to the CF’s joint doctrine deficit, including struggles between the environmental services and lack of a strategic vision, our inability to understand joint operations and a tendency to borrow joint doctrine from others and attempting to adapt it to meet CF requirements.

Environmental Mentality

Soldiers, sailors, airmen and airwomen are schooled in the policies, processes, traditions and history of their individual environments. Over time this develops a loyalty and bond among members within that environment that is essential in building the confidence, teamwork and trust

¹⁰⁸ Nordick, *Can the CF Develop...*, 66.

needed to succeed in the most trying circumstances. Unfortunately, that strong service loyalty is a significant hurdle in establishing consensus and developing CF level policy and doctrine. Especially on issues of joint doctrine, sharing resources, military funding or command and control of personnel and equipment the CF is its own worst enemy. The US forces also suffer from environmental struggles, as Christopher Richie points out, "...the biggest rival of any U.S. armed service is not a foreign adversary but one of its sister services...So we fight each other for money, programs, and weapons systems."¹⁰⁹ Environmental egos will need to be set aside if the CF is going to develop the necessary joint doctrine for future operations as laid out in the 2005 Defence Policy Statement as the new CF focus will be on Integrated Operations.

These goals demand that the Canadian Forces move beyond traditional thinking. Consequently, the operational transformation of the Canadian Forces will focus on the establishment of new joint organizations and combat structures that can meet the Government's expectations for effectiveness, relevance and responsiveness.¹¹⁰

Irwin urges our leadership to overcome the environmental barriers in his discussion on *Transformation and Logistics*, and the need post 9/11 to create smaller rapidly deployable joint capabilities. "Jointness is vital to the success of transformation, as service level concerns can no longer dominate the defence agenda; it recognizes that no one service can achieve the mission on its own."¹¹¹ In the absence of clearly articulated joint operational doctrine, "...JTF commanders revert to the comfort of their own service doctrine."¹¹² The lack of viable joint doctrine also affects our interoperability with other allied forces on multinational operations. Our internal lack of coordination and determination to bring environmentally specific equipment, munitions

¹⁰⁹ General Anthony Zinni, USMC (Ret.), *A Commander Reflects* (U.S. Naval Institute, *Proceedings*, July 2000): 35, quoted in Captain Christopher S. Richie, U.S. Marine Corps, *We Need Functional Doctrine* (U.S. Naval Institute, *Proceedings*, September 2003), 54.

¹¹⁰ Department of National Defence, "Canada's International Policy Statement: A Role of Pride and Influence in the World – DEFENCE," *Defence Policy Statement 2005*; available from http://www.forces.gc.ca/admpol/downloads/Canada_Defence_2005.pdf; (Internet; accessed 16 October 2011), 12.

¹¹¹ Irwin, *Canadian Forces Transformation...*, 18.

¹¹² Richie, *We Need Functional Doctrine...*, 53.

and communications systems into theatre only serves to exacerbate the already complicated task of integrating CF resources into multinational forces.

Understanding Joint

Associated with the environmental stovepipe mentality is a general inability to understand what joint operations actually mean. Especially in the logistics context, as Davies notes, it becomes extremely difficult to develop effective sustainment capabilities to support joint operations. “Development of CF Joint sustainment capabilities has always been severely hindered by the lack of a coherent Canadian concept of Joint operations.”¹¹³ The CRS review on CF Doctrine also identified “...a general lack of understanding and appreciation within the CF for the important role of joint operational doctrine.”¹¹⁴ Canada’s military has a serious need to educate its leadership in the realm of joint operations, providing clear direction and expectations for future CF joint ventures. With firm direction and a basic understanding of the principles of joint operations, our leadership can begin to develop joint doctrine that is relevant to the CF capabilities.

Canadian Focused Joint Doctrine

While the joint doctrine we develop needs to facilitate interoperability with our allies, it also needs to reflect Canadian experience, equipment characteristics and most of all our capabilities as a medium size military with a unique way of looking at the world. For generations we have failed to recognize the depth and value of the experience garnered through CF participation in international joint operations, which has facilitated a systemic lack of confidence in our ability and need to develop CF joint doctrine. During the CRS review,

¹¹³ Davies, *Sustainment Transformation...*, 8.

¹¹⁴ CRS Report, *Evaluation of the Maintenance and Currency of CF Doctrine*, 27.

“Interviewees offered a number of reasons for this state of affairs, such as the conviction that Canada would always be in a coalition, would never assume a leadership role, and therefore had no real need for its own joint operational-level doctrine.”¹¹⁵ However, there have been significant changes in the world since the end of the Cold War and Canada has on a number of occasions moved from a back seat contribution to a more prominent voice and front line participant in the management of conflict and the battle against terrorism. “...Canada’s commitment to assuming an increased leadership role in international expeditionary operations have spawned new or renewed CF operational roles (e.g., counterinsurgency (COIN), Provincial Reconstruction Teams (PRT), amphibious warfare) that require effective joint and combined interoperability.”¹¹⁶

In attempts to manage the pace of changing operations and the lack of resources to devote to the development of joint doctrine, the CF has relied on the work of its allies such as the U.S. and U.K. to provide the basics of its own joint doctrine. This is evidenced in the continual references to Allied Joint Publications (AJP) and U.S. Doctrine that is peppered throughout our existing doctrine manuals and in the Qualification Standards and Training Plans at schools such as CFSAL. “Canada has habitually borrowed US doctrine without any further investment of thought.”¹¹⁷ As Conrad explains the CF support community has more than sufficient experience from operations in places like Bosnia, Cambodia and Afghanistan to develop effective joint doctrine of our own. Each one of our operations has required a different approach to sustainment and support due to factors such as geography, security, intensity of combat and duration which has affected the logistics planning at all three levels (strategic, operational and

¹¹⁵ *Ibid.*, 7.

¹¹⁶ *Ibid.*, iii.

¹¹⁷ Conrad, *Wind Without Rain...*,44.

tactical). “With the high level of involvement in international operations....Canada should be an exporter not an importer of sustainment doctrine in the asymmetric environment.”¹¹⁸ The CF logistics leadership needs to recognize its accomplishments over the past two decades and take stock of the valuable support experience that is currently resident within its ranks. This experience in the hands of dedicated doctrine developers will go a long way to the creation of joint sustainment doctrine that fits the needs and capabilities of the CF instead of trying to tailor the second hand doctrine of others.

If training is the vehicle for institutional change and doctrine is the foundation upon which training is developed, then it is essential that CF doctrine accurately reflect the nature of operations today and for the foreseeable future. Within the logistics branch and especially the army’s support community, there is a grass roots acknowledgement that our current CSS doctrine is seriously out of date and no longer reflects the demands of the current operational environment. At the tactical level valuable lessons are being learned and changes are being instituted in response to the increased threat and difficulties of providing support in these new dynamic battlespaces. Unfortunately little of what is learned tactically ever rises to a level where others can benefit from the experience, and lacking an active approach to doctrinal development these lessons will never amount to much more than good ideas passed from soldier to soldier in the field. The pace of change is rapid as advances in technology are continually changing the dynamics and shape of modern day conflicts. The CF requires a similarly dynamic approach to top down doctrine development which would drive the development of all other levels of doctrine including logistics support. However, in the interim while the strategic level is sorting itself out, the support community needs to take stock of the last 20 years of lessons and

¹¹⁸ *Ibid.*, 6.

experience and identify the urgent doctrinal changes required such as the need to redesign the basic operational support concepts and terminology, the requirement for dedicated force protection for CSS activities and the value of logistics focused intelligence support doctrine to improve the quality of support and ability of our CSS resources to manage the increased threat on operations. “The current trend towards tougher, more complex missions and a growing asymmetric warfare challenge only makes this more urgent. Support systems are attractive targets for asymmetric attack, and the inexorable trend towards smaller, more agile, support structures will place ever-increasing demands on lower level leaders.”¹¹⁹ As the CF begins to scale down its activities in Afghanistan and before being thrust into another mission it is imperative that we focus our valuable experience to the doctrine development process while the lessons are still valid and fresh. As stated in the CF Doctrine Development Manual, it is “...imperative that doctrine development and revision be completed in a relatively short timeframe to prevent the development process from being overtaken by recent events in the field.”¹²⁰

CONCLUSION

The Logistics Branch in its current construct does not effectively represent the diverse nature of the occupations and support capabilities that reside under the single logistics cap badge. Instead, the segregation of logistics from the combat components they support has led to a serious lack of concern for and misunderstanding of logistics capabilities, principles and integral support requirements at all levels of CF leadership. In keeping the branch together logisticians have fostered peacetime beliefs of logistics interoperability and painted a false picture of an organization with a healthy overabundance of personnel resources. Perhaps it is

¹¹⁹ Davies, *Sustainment Transformation...*, 12.

¹²⁰ DND, *CFJP A1: Doctrine Development Manual...*, 1.

time for the CF to take a closer look at dividing the branch along environmental lines and assigning each ECS the responsibility for day to day management of their own support resources. Forcing the environmental staffs to take an active role in managing their logistics resources would increase the understanding of the complexity of logistics and its operations, and facilitate a more accurate sustainment capability picture as the limited personnel numbers are matched against the numerous support requirements. As the rest of the CF transitions towards the fully integrated and interoperable military, capable of conducting joint and combined operations as directed in the 2005 Defence Policy Statement,¹²¹ the Logistics Branch will need to play catch up and develop relevant and more realistic doctrine and training before it can consider participating in the efforts to develop Joint Operational Doctrine and related training. In order to remain relevant and capable of supporting the CF in the 21st Century's dynamic and changing operational environment, the Logistics Branch needs to undergo a deliberate restructure and transformation to enable it to meet the realities of CF operations now and into the future. Division of the branch along environmental lines would relieve the branch leadership of the burden of support and personnel management and allow them to focus on the development of realistic and effective support doctrine and training. Taking on the responsibility for their own logistics support will also provide the leadership in each environment with a better appreciation of the capabilities and issues facing logistics personnel. It is time for the rest of the CF to get become actively involved in military logistics and recognize the burden shouldered by the support community.

¹²¹ DND, *Canada's International Policy Statement...*

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