# The Canadian Army Journal

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**Adapting Military Organizations to Meet Future Shock**
*Major Tony Balasevicius*

**Red Dawn—The Emergence of a Red Teaming Capability in the Canadian Forces**
*Matthew Lauder*

**Canada's Arctic Sovereignty Under Siege: The Prince Patrick Incident of 2040**
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**Deadly Ends: Canada, NATO and Suicide as a Weapon of War in Modern Afghanistan**
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**The True North Strong And Free for the Taking?**
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**Telescoped Ammunition A Future—Lightweight Compact Ammunition?**
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**Note to File—A Comparison of the Information Operations Doctrine of Canada, the United States, the United Kingdom and NATO**
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**The Art of War—Major-General J.H Roberts, CB, DSO, MC, CD (1891–1962)**
*Lawren Phillips Harris*


Canada

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# THE CANADIAN ARMY JOURNAL
# CANADA'S PROFESSIONAL JOURNAL ON ARMY ISSUES

The Canadian Army Journal, a refereed forum of ideas and issues, is the official quarterly publication of Land Force Command. This periodical is dedicated to the expression of mature professional thought on the art and science of land warfare, the dissemination and discussion of doctrinal and training concepts, as well as ideas, concepts, and opinions by all army personnel and those civilians with an interest in such matters. Articles on related subjects such as leadership, ethics, technology, and military history are also invited and presented. The Canadian Army Journal is central to the intellectual health of the Army and the production of valid future concepts, doctrine, and training policies. It serves as a vehicle for the continuing education and professional development of all ranks and personnel in the Army, as well as members from other environments, government agencies, and academia concerned with army, defence, and security affairs.





### Correspondence

All correspondence, contributions, and submissions should sent to The Canadian Army Journal, c/o the Editor at CLS detatchment Kingston (DLCD), PO Box 17000 Station Forces, Kingston, Ontario, Canada, K7K 7B4. Telephone: 613.541.5010 ext. 8721, Fax: 613.540.8713, Email: thearmyjournal@forces.gc.ca

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### Submission Guidelines

Unsolicited article manuscripts, research notes, book reviews, and points of interest are welcome. Articles should be 5000-7000 words exclusive of endnotes, research notes 1500-2500 words exclusive of endnotes, book review essays and reviews 500-1000 words, and points of interest 1000 words or less. Articles may be submitted in either official language. Authors must include a brief biography. Authors must supply any supporting tables, charts, maps, and images, and these should not be embedded in the article text. Articles may be submitted via email or regular mail. All submissions are peer reviewed and the Editor will notify contributors on the status of their submission. Further details regarding author submission guidelines are available at http://www.army.forces.gc.ca/caj/.

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# EDITORIAL—THE NEW COLD WARS

**Major A.B. Godefroy, CD, PhD, plsc**

The Canadian Army continues to devote considerable energy and resources to its core Land Force development activities in support of the ever evolving three army model (Today, Tomorrow, Future). A large part of this activity involves assessing and anticipating future security and defence risks, which is very much the overarching theme of this issue of *The Canadian Army Journal*.

The conceptual and doctrinal design of the future army depends upon its ability to prepare for future shocks as well as an ever adapting and innovative adversary. The opening article by Major Tony Balasevicius examines the definition and influence of future shocks in the context of future army concepts, arguing that the current Land Force development model, with some tweaking, is well placed to respond to threats lying just over the horizon. The next article, by Matthew Lauder, discusses how adversaries and adversarial conditions are modelled and tested through "Red Teaming," a process that further informs the future army development process at many levels.

The future of Canadian Arctic security has also drawn increased attention from Canadian Army thinkers over the last several months, so in this issue we are pleased to deliver two thought provoking pieces on the security and possible future defence of the Canadian Arctic. Major John Sheahan, Nancy Teeple and Peter Gizewski employ a traditional force development tool known as the fictional narrative in their article to portray one possible future security incident where the Army may be required to respond in defence of Canadian sovereignty. Lieutenant-Colonel Craig Braddon examines Canadian Arctic security from a broader perspective, challenging the reader to consider whether or not such northern borders could ever be truly secured.

The challenges associated with securing the Canadian north are easily traced back to the last century. Just over a century ago in March 1898, the Canadian Government responded to a growing concern over its security and sovereignty in the Arctic with the dispatch of military forces. The Klondike Gold Rush was at its height and thousands of prospectors, many from the United States, were pouring across the borders into the Yukon and Northern British Columbia to stake a claim. Worried about the preservation of law and order, Ottawa reinforced the North West Mounted Police first sent to the Yukon in 1894 with the additional supplement of a small force of 203 officers and men, commanded by Lieutenant-Colonel Thomas Evans of the Royal Canadian Dragoons. Known as the Yukon Field Force, their arrival bolstered the physical presence of Canadian authority in the north while providing local security and protection. Recalled in mid-June 1900 for other duties, this first generation "presence patrol" set an interesting precedent for the future employment of land forces in Canada's north.

Looking to other issues associated with force development, Captain Ian McGregor examines the technical details of telescoped ammunition, while Neil Chuka executes a comparative analysis of allied information operations doctrine. Finally, junior scholar Chris Graham offers an interpretation of the elements of leadership as seen through the well-known figure of General Wolfe.

Ever seeking ways to improve the look and feel of the Journal, this issue includes the first instalment of a new regular feature focusing on the art collection of the Canadian War Museum. This tremendous national treasure contains thousands of creations capturing the legacy of Canada's Army, and in each issue we will introduce a piece from the collection as well as the artist who created it.

There are more great things coming to the Journal later this year, but I'll save that news for the next editorial. Rest assured though, you won't want to miss it. As always, enjoy this issue of *The Canadian Army Journal* and don't forget to check out our website.

# HONOURS AND AWARDS

The Meritorious Service Decorations include a military division and a civil division, with two levels each: a medal and a cross. The military division recognizes individuals for their outstanding professionalism and for bringing honour to the Canadian Forces and to Canada. The civil division recognizes individuals who have performed an exceptional deed or an activity that brought honour to the community or to Canada.

On 26 May 2009, Her Excellency the Right Honourable Michaëlle Jean, Governor General and Commander-in-Chief of Canada, announced the awarding of one Meritorious Service Cross (Military Division) and five Meritorious Service Medals (Military Division) to individuals whose specific achievements have brought honour to the Canadian Forces and to Canada.

## CITATIONS

**Lieutenant-General Hans-Otto Budde, M.S.C. (German Army)**
Bonn, Germany
Meritorious Service Cross (Military Division)

Deployed in Afghanistan in 2008 as inspector of the Army, Lieutenant-General Budde's tireless efforts overcame the tremendous challenges inherent with Canada's request for the loan of 20 German tanks and three armoured recovery vehicles. His exemplary determination ensured the closest intergovernmental and military co-operation, and resulted in the successful delivery of this essential operational capability in the shortest possible time. The Canadian Forces have greatly benefitted from Lieutenant-General Budde's outstanding support.

**Chief Petty Officer 1st Class Michael Patrick Gourley, M.M.M., M.S.M., C.D.**
Dartmouth and Halifax, Nova Scotia
Meritorious Service Medal (Military Division)

Chief Petty Officer 1st Class Gourley was deployed to the Persian Gulf as the coxswain aboard *HMCS Charlottetown* from December 2007 to April 2008. His organizational skills ensured the ship's seamless integration into a United States carrier strike group. His leadership and steadfast dedication enhanced both the operational readiness of the ship and morale of the crew. Chief Petty Officer 1st Class Gourley's outstanding efforts played a vital role in the ship's notable contribution to the campaign against terrorism.

**Major Trevor Gosselin, M.S.M., C.D.**
North York, Ontario and Dawson Creek, British Columbia
Meritorious Service Medal (Military Division)

Major Gosselin commanded the Battle Group Tank Squadron in Afghanistan, from August 2007 to March 2008. During numerous combat missions, his personal example and dedication united soldiers from different units into a seamless fighting force. His extensive knowledge of armour capabilities, limitations and tactics were key to the successful introduction of new equipment to theatre. Major Gosselin's inspirational leadership and tactical acumen enhanced his squadron's combat effectiveness.

**Major Christopher Robin Henderson, M.S.M., C.D.**
Ottawa, Ontario and Halifax, Nova Scotia
Meritorious Service Medal (Military Division)

Major Henderson was deployed to Afghanistan as the officer commanding C Company, from February to August 2007. Responsible for establishing security in the Panjwayi district, he conducted highly effective counter-insurgency operations and earned the trust and respect of the local population. His mentorship of Afghan National Security forces greatly improved their operational effectiveness. In the face of adversity, his unwavering leadership ensured a Canadian presence in the district.

**Colonel Bernd Horn, O.M.M., M.S.M., C.D.**
Ottawa, Ontario and Montréal, Quebec
Meritorious Service Medal (Military Division)

Between 2004 and 2007, during his tenure as director of the Canadian Forces Leadership Institute, Colonel Horn developed this organization into a nationally and internationally recognized centre of military leadership, professionalism and ethics. He also conducted a successful worldwide outreach program to share Canadian Forces concepts with military and academic audiences around the world, while bringing back best practices to benefit Canadian conceptual and doctrine development.

**Commander Joseph Honoré Patrick St-Denis, M.S.M., C.D. (Retired)**
Victoria, British Columbia
Meritorious Service Medal (Military Division)

As commander of Task Force Arabian Sea from November 2007 to May 2008, Commander St-Denis demonstrated exceptional professionalism and dedication. While commanding HMCS *Charlottetown*, he conducted maritime interdiction operations that successfully reduced terrorist activities in the area, bringing great honour to Canada.

# THE CANADIAN ARMY JOURNAL
## Welcomes New Members

It is with great pleasure that *The Canadian Army Journal* welcomes two new faces to its support echelon this year:

Sergeant Kurt Grant, previously from the Directorate of History and Heritage, has joined DLCD as the research and outreach coordinator and will also be acting as assistant editor for the Canadian Army Journal. Sgt Grant joined the army in 1980, serving first with the Governor General's Foot Guards, and then later, the Brockville Rifles. He served in the Former Yugoslavia in 1994-95, and has also had an extensive military shooting career resulting in provincial and national awards and participation in several international combat shooting teams. He is a previously published author, and looks forward to writing for the journal.

Richard Palimaka has volunteered to join the journal as the new book review editor, after recently joining the staff at the Fort Frontenac Army Library in Kingston, Ontario. Richard studied International Relations at the University of Toronto, and is continuing his education at the Royal Military College of Canada, Kingston. During a long professional career as a publisher of military history, Richard acted as Canadian representative for several publishers from the UK and US. His family background has created a strong interest in Eastern European affairs with a particular emphasis on Polish military and diplomatic history. He is currently translating two works from Polish to English, and is a volunteer at local military museums.

*The Canadian Army Journal* is very pleased to receive the additional support, and once again we wish them welcome.

# ADAPTING MILITARY ORGANIZATIONS TO MEET FUTURE SHOCK

**Major T. Balasevicius**

In attempting to shed light onto the future security environment, military organizations have traditionally used a concept known as a trend-based approach to prediction or trend analysis. This method uses various analytical tools to look at trends in key areas such as technology, society, politics, economics, the environment, and security, which are then analyzed to spot patterns. Based upon the outcomes, alternative operating environments are articulated usually in the form of likely future scenarios.[1] Despite its popularity, particularly within the capability development world, a major weakness of this method is its inability to take the unexpected into account. In an effort to overcome this particular problem, planners started looking at the possibility that military organizations could be hit by an unexpected incident or event. This event is being referred to as a future shock.[2]

According to the American *Joint Operating Environment: Trends & Challenges for the Future,* shocks "accelerate or decelerate a trend, reverse the direction of a trend, or even precipitate a new trend. Simply put, shocks alter the course of trends" and this can drastically change the course of events.[3] In addition to producing a more robust model for attempting to predict the future, the concept holds other advantages for military organizations willing to see its potential. For example, it recognizes that institutions do not necessarily have the foresight, resources or motivation to change the status quo until they are actually forced to do so. As a result, they need some type of occurrence to precipitate a premature re-examination of established methods and assumptions, and if used properly, a future shock can provide both the foresight and motivation.[4]

However, the main strength of a future shock actually derives from its ability to provide planners with a mechanism to create more adaptable force structures. As Colin S. Gray, a well-known and respected analyst points out, "the future is not foreseeable, at least not in a very useful sense." The challenge, he asserts, "is to cope with uncertainty, not try to diminish it."[5] In this respect, creating a force structure that has the adaptability to withstand fundamental changes induced by a future shock is something that should be of great interest to and seriously considered by force developers.

This paper will explore the concept of future shock. It will then provide a construct by which the Canadian Army can develop a rational model to predict likely options for organizational change should it have to deal with a future shock. Finally, it will look at specific organizational changes that the Army might consider to minimize the effects of a future shock by creating a force structure that is more adaptable in dealing with extreme change.

## The Idea of Future Shock

The concept of future shock was first introduced by Alvin Toffler in 1970 to describe a psychological state that is reached by the introduction of massive change in a short period of time. In fact, "Toffler's simplest definition of the idea is a perception of 'too much change in too short a period of time'."[6] At its foundation, the theory is predicated on the belief that the rapid pace of industrial and technological changes, occurring at the time, would have a major impact upon society. Toffler believed that this impact would derive not from the actual changes that were occurring but rather from society's efforts at adjusting to the new realties brought about by the rapidness of the change. Under such circumstances, Toffler felt that society's challenge was to understand and gain control over the pace of change so that it could be properly focused and developed.[7]

From a military perspective, Toffler's concept of *too much change in too short a period of time* remains the central premise. However, the military concept focuses on describing a specific strategic event that is of such magnitude and rapidness that it will fundamentally reorient an institution's strategy, strategic investments, and missions.[8] Nathan Freier, author of *Known Unknowns: Unconventional "Strategic Shocks" in Defense Strategy Development,* describes these events as "game-changing" and uses the idea of strategic shocks to explain events that "catch national security institutions like DoD [Department of Defence] by surprise by the speed of their onset, as well as by the breath and depth of their impact."[9]

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Strategic shocks, he asserts, "suddenly and irrevocably change the rules of the game, as well as the contours and composition of playing surface itself."[10] In fact, Freier goes on to suggest that the change can be so drastic and strategically dislocating that it can "cause sudden defense adaptation to new, unfamiliar rule sets or the absence of rules altogether." Freier believes that under such conditions organizations are forced to make snap judgments under the pressure of time and rapidly changing circumstances.[11]

From an intellectual perspective, it is important to differentiate the idea of future shock from an unexpected strategic contingency or what Freier describes as strategic surprise. Although both are unanticipated events, it is the impact and disruption that each event causes that ultimately determines its classification. Unfortunately, as Freier points out, there "is no scientific break point between strategic shock and strategic surprise." Rather, the separation between the two is normally a function of the event's impact and the degree to which the organization was able to anticipate the occurrence within its planning contingencies.[12]

However, understanding the difference between simple surprise and shock is important because in theory the line between the two becomes the trigger for significant organizational change. For example, Freier believes that Saddam Hussein's 1990 invasion of Kuwait was little more than a strategic surprise. This is because both the event and the response to the Iraqi assault were anticipated in so much as it could be challenged by the existing force structure and capabilities. As a result, there was no need for a fundamental reorientation of defence strategy or a review of defence priorities as a result of the action.[13]

Such was not the case after the 11 September 2001 (9/11) attacks; these "were not necessarily unpredicted as 9/11-like events but the likeliest American response to them

were both inadequately considered and undervalued in defense planning." Yet, when the attacks did occur they had such a disruptive effect upon American perceptions of the threat from terrorism that it forced an institutional revolution within the security establishment.[14]

The idea of future shock does not suggest that an event has to be a direct attack on a nation such as was the case for the Americans during the 9/11 events. In this respect, it is Toffler's idea of perception. For example, the poor performance of Israeli's military machine during the 2006 Israeli—Hezbollah War was a shock to most Western military institutions. This was because Israeli forces were generally viewed as being the best in the region. More importantly, they were structured on the U.S. Army's future concepts of effects-based operations, network-centric warfare, and long-range precision fires. However, despite its advantages, the hi-tech Israeli forces were brought to a standstill by a much smaller force of a few thousand irregular soldiers.[15] This event, along with other setbacks in Iraq and Afghanistan, forced the Americans to reconsider many of their current perceptions about the nature of future warfare.[16] Major Bob Near, a Canadian Army Officer, observes that this American introspection has gone so far as to question many of the assumptions underlying their force development efforts. As a result, the Americans have started "abandoning or 'parking' a number of concepts associated with Transformation such as Effects-based Operations (EBO), Network-centric Warfare (NCW), Operational Net Assessment (ONA,) and System of Systems Approach (SoSA.)."[17]

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Logically, in questioning current assumptions about the nature of future warfare many organizations are starting to look for better methods of anticipation. In an article written for the *Federal Times*, Terry Pudas suggested, "Anticipating and managing low-probability events is a critically important challenge to contemporary policymakers, who increasingly recognize that they lack the analytical tools to do so."[18] The problem with this idea is that although the concept of future shock provides a different perspective at looking at the future, and may even develop existing analytical tools for better prediction, there is no grantee it can actually deliver better foresight. Gray puts this problem into context when he states, "We will certainly be surprised in the future, so it is our task now to try to plan against the effects of some deeply unsettling surprises. The key to victory here is not the expensive creation of new conceptual, methodological, or electro-mechanical tools of prediction. Rather it is to pursue defense and security planning on the principles of minimum regrets and considerable flexibility and adaptability."[19]

If one assumes that the future cannot be predicted, then how do organizations prepare for an unknown event before it has actually occurred? The obvious answer, as Gray points out, is that they should pursue defence and security planning on the principles of maintaining as much organizational flexibility and adaptability as possible. However, in order to do this some type of construct is needed so that flexibility and adaptability can be focused on the

most likely changes that will be needed to deal with future shock. Developing this type of a construct can be accomplished by understanding the basic elements of warfare at the strategic level.

## The Limits of Potential Change Resulting From Future Shock

From a military perspective, options for organizational change at the strategic level are rather limited. The key to understanding this is to first comprehend the basic elements of National strategy, and more importantly, the specific decisions that must be made by a military organization before implementing its strategy. Williamson Murray and Mark Grimsley emphasize that in order to be successful, strategic planning must be done in relation to political objectives. They go on to state that there are a number of strategic enablers such as diplomatic, economic, and military resources that are available to a nation for the execution of the strategic plan. However, they caution that strategy is also influenced by other factors. These include such things as geography, history, culture, economics and government systems, all of which must also be considered when planning or analyzing the conduct of war.[20]

Murray and Grimsley end their preface by emphasizing the need to get the right strategy from the very beginning. They conclude, "Despite the various influences that affect strategy it is more important to make correct decisions at the political and strategic level than it is at the operational and tactical level." They stress that "no amount of operational virtuosity…[can] redeem fundamental flaws in political judgment. Whether policy shaped strategy or strategic imperatives drove policy was irrelevant. Miscalculations in either led to defeat, and any combination of politico-strategic error had disastrous results." Thus, from a military perspective, a fundamental decision that must be made at the strategic level prior to the start of a conflict is the type of war that must be fought in order to achieve the political objectives. For it is this decision that ultimately influences force development and eventually evolves the character of a military's fighting organizations.

In order to deal with this particular issue we must look at what types of war a nation can actually fight. According to Dennis Drew and Donald M. Snow, authors of *Making Strategy: an Introduction to National Security Processes and Problems*, there are three types of war that modern armed forces might be required to deal with. These include conventional, counterinsurgency, and strategic nuclear warfare.[21]

Within the Canadian context these conflicts have been referred to as View 1, 2 and 3 environments.[22] According to the Canadian Army's *Future Army Capabilities,* View 1 is conventional battle between national entities and it "suggests that this View will see established military forces engage in high-tempo operations that involve the application of complex technologies." An example of this form of conflict was seen in the 1990 Gulf War. The document states that "since 1945, there has been an average of two View 1 conflicts per decade."[23] The other form of possible conflict is what the document refers to as View 2.

View 2 clashes are asymmetric in nature and this type of conflict usually "envisions the nation state opposed by armed bodies that are not necessarily armed forces." Moreover, it may be "directed by social entities that are not necessarily states, and fought by people who are not necessarily soldiers."[24] Many security analysts believe that the international community will be facing these View 2 type conflicts for the foreseeable future.[25] The third view or View 3 is what can be termed strategic nuclear warfare, or war involving the use of nuclear weapons in a major nuclear exchange.

Of course, few conflicts fall neatly into one or the other of these Views. In fact, many, if not most, conflicts have been mixtures of View 1 and 2. As a result, there is recognition that transitions may occur from one form of conflict to another, as happened during the French Indo-China conflict from 1948-1954. Conversely, these forms of conflict may also occur simultaneously, as happened in South Vietnam during the period 1963-1968.[26] Moreover, warfare can also be carried out between the realms of View 1, 2 and 3. This type of conflict has had a number of designations but is now being referred to as "hybrid" conflict.

According to Frank Hoffman of the Centre for Emerging Threats and Opportunities, "hybrid wars entail a convergence and fusion of regular and irregular warfare techniques that can be employed both by states and non-state actors."[27] Within this construct, no one type of warfare would necessarily predominate. In fact, the employment of a wide range of fighting methods, "involving conventional capabilities, irregular tactics and formations, terrorist acts, coercion, and criminal disorder are all used singularly or in combination to achieve synergistic effects."[28]

Although this concept may sound new and innovative, it is not. In fact, hybrid warfare can be defined as incorporating various aspects from each View. Moreover, it is important to remember that many of the components of today's hybrid warfare actually derive from insurgencies based within the View 2 context. Thus, understanding the development of an insurgency is important to comprehending this current irritation of hybrid warfare as it is likely to predominate at least for the foreseeable future.

## Understanding Insurgency (View 2 Conflict)

While each insurgency is unique and develops specific features in order to meet the particular requirements of the local situation it is facing, there are a number of common characteristics that can be derived from them. In their most basic form, insurgent organizations are usually broken down into three major components. These consist of an oversight committee, a political element, and a military capability. As insurgent organizations tend to develop under the shadow of national security forces, their own security is a top priority. As a result, their initial capabilities will usually focus around small cells that if successful, develop over time and grow into larger networks creating a very large but decentralized organization. According to Julian Paget, an expert in counter-insurgency, these organizations remain extremely resilient largely due to the fact that they operate in small groups or cells, which have little or no knowledge of each other.[29]

Initially, insurgent organizations will attempt to build a political apparatus as a means of winning popular support. In fact, this is critical to their survival and future development. It consists of an oversight committee, which contains the insurgency's leadership along with administration, a public affairs (propaganda machine) capacity, and a foreign affairs organization/cell that develops international contacts. The foreign affairs cell looks for arms supplies, negotiates access to sanctuaries across the border in friendly countries, and attempts to establish political legitimacy.[30] The political leader, who may or may not also be the movement's military commander, will control this oversight committee.[31] Over time, the committee will develop general policies and oversee the direction of the military and political campaigns. The next major organization is the political apparatus.

The type and size of cells within the political apparatus will vary, but they will eventually include a legitimate political party. It also has an intelligence organization that recruits and develops people to infiltrate the Government's administration. Likely targets will include its armed forces, police, and other centres of national power. As these cells start to become more active they will attempt to exploit weaknesses within the government's infrastructure.[32] This is done by organizing demonstrations, strikes, or by carrying out acts of sabotage. Insurgent organizations may also develop union activists and other types of pressure groups to mobilize additional popular support. Depending upon the sophistication and resources of the organization, other cells may be set-up to provide social services such as hospitals, schools, shelter, food and anything else that fills a void in government services.[33] A key part of the insurgent organization during it early stages is the development of the terrorist cell. This cell is often used to intimidate the population, and when necessary, strike at the governing authority's political institutions with bombings, killings of key officials and the like.[34] The third major component within an insurgent organization is its military arm.

The military component is usually subordinate to the political authority. It will start to develop at the same time as the political cells but will usually establish itself in rural areas far from the government's powerbase. That being said, it will remain as close as possible to the population that it draws upon for support. The idea is to create a base of power in safe areas where the local population is sympathetic to the cause.[35]

The military arm of the insurgency is often referred to as a guerrilla force, and it will include operational components with headquarters organized around regional, district and local (town or village) areas.[36] The basic organization of a guerrilla force is centred around a group of 10 to 30 men, which will operate independently in an area allocated to it by the central military command, and will usually be controlled directly by a regional headquarters.[37]

For larger operations, several groups will be brought together for a specific mission; however, as a general rule there is no large standing guerrilla force that can become a target of attack. In addition to the operational components, there are usually a number of supporting elements such as a training cell and logistical support. These components may work directly with international contacts if extensive support is being provided from within and outside the country. In such circumstances, bases and training facilities will be set-up along the border to facilitate that particular support.[38]

The exact political and military structure of each insurgent group will depend upon a number of factors, but when fully developed will attempt to coexist at each level from region and district down to the town or village. Even at the most local levels the structure remains decentralized. As time goes by these organizations become more efficient, and with growing support, they can start to develop conventional war fighting capabilities. This particular evolution played out during the 2006 Israeli-Hezbollah War where Hezbollah was fighting pitched defensive battles with Israeli forces.

When looking at today's security environment it is important to remember that asymmetric warfare, terrorism and irregular warfare may be the designated name for the type of conflict being fought today, but they all derive from the View 2 (counter-insurgency) construct.[39] What armies need to understand as the move into the future is how these insurgent groups and their application of what is now being termed "hybrid warfare" is actually evolving. In this respect, these groups are no longer revolutionary forces attempting to overtake the legitimate governing authority within a state, but rather they have evolved into the standing army and or security/governing force for oppressed minorities within the state. As a result, they have developed a long-term presence within the country. It is the product of this evolution, combined with the application of modern technology, which has created the complexity that modern military forces are now facing.

## The Views of War and the Ideas of Future Shock

These Views of war and how they fit within military strategy can be seen on the graph at Figure 1.

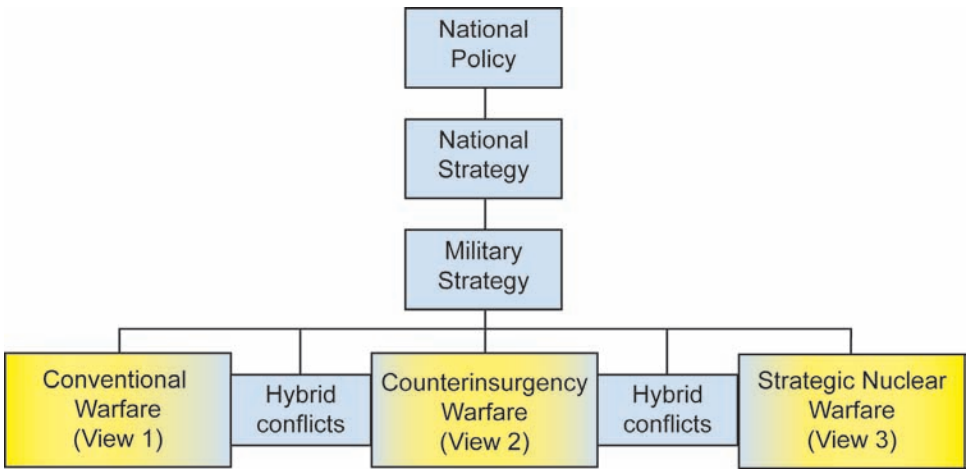


**Figure 1: Views of War**

When dealing with the idea of future shock, the most likely response for institutional change will be the movement of the organization's structure from one View to another, or possibility into a hybrid form of conflict. For example, if one applies Freier's earlier examples of Saddam Hussein's 1990 invasion of Kuwait and the 9/11 attacks in 2001, we see that the fundamental reorientation of American defence strategy moved from a View 1 focus to that of a View 2 outlook with overlap into a hybrid form of warfare.[40]

In fact, the trend of looking into the future from this perspective is already occurring. In describing the most likely threats in the near future, General Mattis, NATO Supreme Allied Commander Transformation, and Commander U.S. Joint Forces Command, has stated that the Americans must be ready for a peer competitor (View 1), a failed or failing state (View 2 or Hybrid) and a globally network terrorist threat (Hybrid).[41] Dr. Steven Metz, a respected American analyst, has made the choice far simpler suggesting that the current security debate about the future is really portrayed "as a choice between optimizing for counterinsurgency [View 2] or conventional warfighting [View 1]."[42]

The major benefit of looking at conflict from this perspective is that it does not allow the complex nature of war to become more confusing by the addition of meaningless phrases such as asymmetric warfare, terrorism or irregular warfare, to describe what is perceived by those developing the fashion trends of the warrior as some new type of warfare.

## Adaptive Operations Moving From One View to the Next

Although the concept of Views may be of some interest to define the varying types of conflict, how might it be used to minimize the disruption of military future shock? The idea is to develop force structures based upon their abilities to cover off various Views. Thus, in order to minimize the effects of a future shock, the Canadian Army needs to position force development to address the challenges of both View 1 and View 2 environments while considering the specific needs of dealing with the effects of View 3 conflict.

To accomplish this, the Future Army will need to develop multi-purpose capabilities that can move across the various Views in order to quickly adjust to changing circumstances. Specifically, future capabilities will have to be designated for a particular View, but great care would also be needed to determine what additional capabilities should be integrated with units optimized to carry out operations within other Views.

Obviously, countries such as Canada, which do not have the resources to cover off all Views, will need to set priorities based upon which View they will want or need to fight within. For example, in creating a medium force based upon light armoured vehicles (LAV), the Army has decided to create a capability that can cover off key roles within a View 1 conflict while addressing the full range of tasks inherent within View 2 missions.[43]

In this respect, the current "vital ground" for force development within the Canadian Army is that area within the spectrum of conflict is View 2.[44] In fact, this force structure has allowed the Army to effectively adjust toward many of the Hybrid and counter-insurgency threats that have evolved over the past few years, and baring a future shock these threats are expected into remain at the forefront of security concerns into the foreseeable future. To this end, the Army has already developed its interpretation of the future security environment based upon a View 2 scenario. In fact, they have promulgated this new operating concept for its Army of Tomorrow (AoT)[45] under the heading of *Land Operations 2021: Adaptive Dispersed Operations* (ADO).[46]

*Land Operations 2021* recognizes the changing nature of land operations and the need for forces that are far more "agile, lethal… multipurpose and full spectrum capable."[47] However, the document believes that in order to create and exploit battlespace opportunities future forces will be expected to operate "dispersed—in terms of time, space, and purpose—throughout the width and depth of the battlespace."[48]

In order to accomplish this level of battlespace saturation the document stresses the need for operations to be "coordinated, interdependent, full spectrum actions using widely

dispersed teams across the moral, physical and informational planes of the battlespace."[49] The main problem with this concept is that when forces are operating in a widely dispersed manner they are vulnerable to interdiction by larger concentrated View 1 threats. In fact, the concept document acknowledges this venerability by suggesting that situations may develop that will require forces to concentrate in order to carry out what is referred to as "operations as a larger aggregated force."[50] The document also predicts that such operations would occur in circumstances "where the adversary can locally mass more combat power than the dispersed force."[51]

Under these conditions, the idea of dispersed operations envisioned within the ADO construct would begin to look like conventional operations within a View 1 context. In this regard, ADO in its current form is a far too one dimensional doctrine and clearly suited to the demands of counter-insurgency (View 2) missions where aggregate force on force operations will be the exception rather than the rule.

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Of course, this is not much of an issue in the current or projected security environment where dispersed operations provide the necessary basis for area security needed to meet View 2 requirements. However, if the situation were to change significantly as in the case of a future shock, where the organization would be forced to move into a View 1 or possibly View 3 environment, ADO in it present iteration would be of little value to the Army. In such circumstances, a complete readjustment of doctrine and force structure would be necessary in order to readjust.

To overcome this limitation on flexibility that would prevent a quick adjustment to a future shock, it would be necessary to develop a concept that allows conventional and dispersed operations to be fought simultaneously. Moreover, doctrine would have to be flexible enough so that the Army does not have to extract large number of forces out of the battle area for re-training in order to move from one View to the other. The solution to this problem is to pair various conventional capabilities with irregular forces; thus, creating a

more holistic force structure that could operate from a common doctrine and be capable of fighting View 1 and View 2 warfare.

In fact, some have augured that the pairing conventional and irregular forces is long over due. Gray points out, "Many conflicts [now] witness both regular and irregular styles of combat, sometimes simultaneously. The future does not belong to small wars of an irregular kind; alas, it belongs to both regular and irregular warfare… Because NATO countries have to be prepared for the full spectrum of warfare, the challenge is to strike an effective and sustainable balance between capabilities for regular and irregular warfare."[52]

Interestingly, this type of fighting is not new as it has been carried out by Western armies, which have paired conventional and irregular forces in order to fight irregular and conventional warfare throughout much of history. The concept has sometimes been referred to as compound warfare.[53]

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## Compound Warfare: The Army's New Doctrine of Flexible Response

Compound warfare is the simultaneous use of conventional and irregular forces against an enemy.[54] According to Thomas M. Huber, editor of *Compound Warfare: That Fatal Knot,* operations of the regular and the irregular forces are extremely complementary. He explains that the irregular forces can give important advantages to the regular force, such as developing superior intelligence information while suppressing enemy intelligence. They can also provide supplies and quick passage through territory that they occupy. More importantly, irregulars will deny supplies and interdict passage to an enemy.[55]

Huber also believes that regular forces can give important advantages to local irregulars.[56] For example, they can pressure the enemy to withdraw and force them into or out of areas where irregulars are operating, thus creating the conditions for greater freedom of action. "The main force can provide strategic information, advising the guerrillas of when and where to act to accommodate the overall effort."[57] The synergy derived by combining regular and irregular operations makes compound warfare extremely effective for operations over large areas and in difficult terrain. If properly developed within the construct of ADO, such operations would significantly enhance the flexibility and effectiveness of future doctrine.[58]

From a historical perspective, some of the more famous cases of compound warfare's effectiveness include Wellington's use of irregulars in Spain (1808 and 1814), Mao Zedong in China's revolutionary wars (1927 to 1949), and Ho Chi Minh in Vietnam's wars of independence (1945-1975).[59] In fact, compound warfare was an integral part of the early Canadian "way of war" as both the English and French used conventional and militia units in North America that integrated irregular forces at the tactical level, such as native allies during much of the eighteenth and early nineteenth centuries.[60]

French Canadian militiamen adapted these tactics to the conditions of fighting in the North American wilderness faster and better than the Americans, and for this reason up to about 1757 the French usually had a tactical advantage over their English counterparts. Eventually, the British discovered that they could overcome this very effective form of warfare by adopting similar tactics.[61] Michael Pearlman, associate professor of history at the United States Army Command and General Staff College points out, "The British did more than slavishly copy the French. They domesticated irregular operations…[this was done] by substituting rangers for Indian auxiliaries, and then more reliable light infantry regulars for American rangers."[62] Ironically, once the British had developed a capacity for irregular warfare, they used it to great effect on their enemies, and even exported the idea to the Spanish operational theatre.

The number of irregulars operating with Wellington's forces during the Spanish campaign provides some insight into true effectiveness of compound warfare. Huber states that "France had 320,000 troops in Spain at the height of its presence in 1810 and…during their six-year campaign, French forces lost 240,000 men. Of these, 45,000 were killed in action against conventional forces, 50,000 died of illness and accident, and 145,000 were killed in action against guerrilla forces." By comparison, he estimates that "…Wellington's army in Spain at its height had only about 40,000 troops, with some 25,000 Portuguese forces attached." Incredibly, despite enjoying a conventional force advantage of four to one the French were unable to achieve any type of measurable success let alone victory during the six-year campaign.[63]

This potential should be particularly intriguing to the Canadian Forces as it seeks to maximize the organizational and operational capabilities being created or enhanced as part of the ongoing transformation efforts. From an Army perspective, "boots on the ground" are always an issue and a doctrine based upon the concept of compound warfare could be a significant combat multiplier.[64] However, if such an operating concept were to be integrated into the doctrine of the Army, it would need the right force structure. Different capabilities would need to be optimized for specific Views, yet still be flexible enough to move into the others with little warning. Once this has been accomplished, they need to be given capabilities that can allow them to fit within the realm of hybrid conflicts.

## The Army's Versatile Capabilities for Flexible Response

In order to achieve the kind of flexibility needed to adapt quickly enough to a future shock, the Army would need to refine its current capabilities so that they could work together while moving between the various Views. The key component of this review is to determine how heavy, medium and light forces can interact together within and between the different Views.

**Heavy and Medium Forces**: Intellectually speaking, the difference between heavy and medium infantry is the type of fighting vehicles each capability uses in combat. In this respect, they are both mounted capabilities, except they are distinguished by their amount of firepower and protection. Based upon maximizing firepower and protection, heavy forces are often considered the most versatile type of capability on the battlefield. This is because they are the only force capable of carrying out the full spectrum of operations within both View 1 and 2 environments. This flexibility is increased by the integration of various armoured vehicles and other capabilities from within the combat arms and from

other joint capabilities. The other type of mounted capability is the medium force. These forces are normally equipped with lighter vehicles such as is currently the case with the Army's LAV III.

Medium forces are optimized to carry out operations within the spectrum of View 2 conflict; however, they can attempt to cover some areas where View 1 and 2 environments overlap (Hybrid). Within this band, medium forces will usually attempt to position themselves for missions across the broadest possible range of operations. That being said, it is important for capability developers to remember that these forces have limitations, and consequently, tradeoffs would have to be made with their employment particularly where View 1 operations might predominate.

**Light Forces**: In general, the Canadian Army is capable of developing two types of light forces. These compose of "general purpose" and specialized forces. General purpose light forces are optimized to operate within complex terrain such as mountain, jungle, forested areas, urban and arctic environments. In order to effectively work with heavy forces in either View 1 or 2 situations, general purpose light infantry such as those found in the Light Infantry Battalions (LIBs) will have to be properly equipped with weapons that give them adequate stand off ranges against heavy or medium forces. Moreover, they must be sufficiently mobile to counter or avoid the shock action and firepower capable of being generated by heavy units.

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An example of the type of combined operation that employed light forces against heavy forces within modern operations occurred during the initial stages of the 1973 Arab-Israeli War. At the start of the conflict, Egyptian Ranger groups along with specialized light infantry tank hunting teams, armed with Sagger AT missiles, crossed the Suez Canal to plant mines and set up anti-tank ambushes in an effort to prevent Israeli armoured units from interfering with the main crossing and subsequent attacks on the strong points that made up the Bar Lev line.[65] The second type of light force available to the Canadian Army is what is refereed to as specialized light capabilities.

Specialized light units were formed during the early stages of the Second World War and soldiers were specifically trained and organized to carry out large scale direct action (DA) missions. DA missions are often referred to as "short-duration strikes and other… offensive actions to seize, destroy, capture, recover, or inflict damage on designated personnel or materiel."[66] The development of these capabilities had its genesis with the creation of Soviet and German Airborne troops during the later 1920s and early 1930s, and reached its pinnacle with the creation of the British Commandos in 1940, which were among the first "special" light units formed by the Allies.

The Commando units were "mobile and hard-hitting light troops that could raid or operate for limited periods behind the enemy's lines."[67] As these early units experimented with the concept of DA, they ultimately produced a number of additional specialized capabilities that are often seen in today's Ranger, Airborne, Marine, Commando, and Special Forces units.[68] One could argue that the Canadian Forces Canadian Special Operations Regiment (CSOR) fits into the category of specialized light infantry.

Over time, these types of units have proven useful in providing a nation with a quick reaction capability primarily for View 2 actions. However, they have also been selectively employed in View I situations.[69]

**Special Operations Forces (SOF)**: SOF is currently not part of the Canadian Army, but has a role to play in all Views and within Hybrid war.[70] This is because these warriors operate comfortably in ambiguous situations and possess the necessary skills to successfully complete complex missions. These skills, combined with outstanding individual initiative, have allowed SOF to transform specialist-training competencies into relevant skill sets that have thus far proven sufficiently adaptive to meet the changing threats and challenges of the 21st century. This flexibility is the direct result of the quality of soldiers that SOF selects, but it is also a derivative of the employment concept, organization, and comprehensive training programs that have been developed by these organizations to meet specific core missions.

The core missions of SOF evolved from the operational circumstances that existed during the first half of the Second World War when dedicated units were created to carry out explicit missions that included DA, special reconnaissance and surveillance, and unconventional warfare. As these missions were very specialized they had a significant influence upon the organization, training and equipment of each unit.[72]

In order to develop a concept based upon the simultaneous use of conventional and irregular forces against an enemy that covers off all operations within View 1, 2 and Hybrid warfare, the Army would need to make sure that the components of its heavy forces, medium/general purpose light forces, along with specialized/SOF capabilities, can work together on the battlefield.

## Towards a Future Operating Concept

Within the future operating environment, heavy forces will have to be optimized to carry out conventional operations primarily within a View 1 spectrum. Their secondary task would be to carry out either conventional or dispersed operations within a View 2 environment. Medium and general purpose light infantry would operate within View 2 situations, and when necessary, would support heavy forces using dispersed operations within a View 1 context. However, when operating within View 1, they would have to be properly equipped to work with and against heavy units. In this regard, the idea is to have a force structure that can cover off both concentrated conventional and ADO operations while being flexible enough to quickly shift from one View to the other as commanders adjust forces to the changing situation.

The main problem with this concept is the need for manpower or “boots on the ground” that will be necessary to cover off both of these requirements. This is where irregular operations integrated into doctrine come into play. Although medium and general purpose light infantry would provide the foundation for a View 2 response using the tenets outlined in ADO, their area of operations would be superimposed onto SOF and specialized light infantry carrying out irregular operations within the same construct. These forces would be responsible for two activities. First, they would carry out patrols, raids and other interdiction activities (specialized light infantry). This would be done while developing an irregular capability using SOF trained for unconventional warfare.[72]

Unconventional warfare (UW) is a new concept for the post-Cold War era Canadian Army, yet in its most basic form it can be defined as the ability to organize, train, equip, advise and assist indigenous and surrogate forces in military and paramilitary operations. According to the American *Joint Special Operations Joint Publication 3-0517,* UW are operations that “involve a broad spectrum of military and paramilitary operations, normally of long duration, predominantly conducted through, with, or by indigenous or surrogate forces that are organized, trained, equipped, supported, and directed in varying degrees by an external source.”[73]

The publication explains that "UW is unique in that it is a SO [special operation] that can either be conducted as part of a geographic combatant commander's overall theater campaign, or as an independent, subordinate campaign. When conducted independently, the primary focus of UW is on political-military objectives and psychological objectives." The document then goes on to stress that "UW includes military and paramilitary aspects of resistance movements. UW military activity represents the culmination of a successful effort to organize and mobilize the civil populace against a hostile government or occupying power."[74] These operations are carried out using relativity small cadres of UW specialists who develop, sustain and coordinate resistance organizations so that their activities can be synchronized to achieve or further national security objectives.[75]

While irregulars, regardless of their form (national army, disenfranchised group, etc.), will take some time to become effective, as a result, specialized and possible general purpose light infantry could be used as synthetic irregulars until this occurs. As irregulars become proficient they will move into the mainstream operations of the View 2 realm, thus allowing the Army to refocus its conventional resources. The benefit of this type of concept is that a number of different and unique capabilities—heavy, light, SOF—can be brought together onto the battlefield in a more holistic manner than had previously been the case.

In this respect, the paradigm has changed. Rather than creating a force structure that produces forces at the strategic, operational and tactical level with very little integration, this concept would bring all the capabilities together.

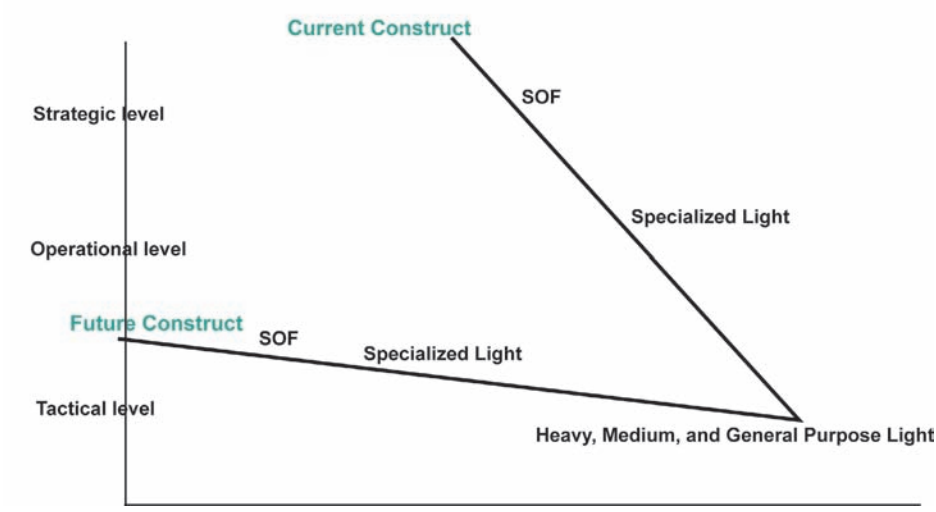


**Figure 2: Alternative Constructs**

As can be seen in Figure 2, SOF is normally employed at the strategic level, whereas specialized light forces are focused at the operational level. Conventional heavy, medium and light units usually work at the tactical level. Bringing these capabilities into a single doctrine would allow the Army to control a much larger battle area with a smaller number of forces, while beginning the process of force generation almost from the first day of the conflict regardless of the actual View being fought.

More importantly, such a force structure would be flexible enough so that each capability could operate independently if the circumstances required, or they could be brought together in various configurations, thus adapting to the most likely requirements for change resulting from a future shock. In the end, it is this flexibility employed within a View context that is best able to mitigate the possible effects of future shock.

## Conclusion

In summary, if one accepts the idea that future shocks will occur and are likely to be of such magnitude that they will force a re-examination of planning assumptions, and possibly reorient Army thinking, logic would suggest that the best solution would be to create an organizational structure that can adapt to as many conditions as possible. To do this, one must first understand the limitations of future shock on military organizations and then produce a force structure that can adapt to the most likely changes resulting from a shock. Such an option could be a force structure and doctrine based upon a modern adaptation of compound warfare, which brings together various conventional and irregular capabilities into a holistic team on the battlefield.

However, if such change is to occur, the Army will have to review its current capabilities. For example, light force development would have to move from an emphasis on upgrading mobility and firepower to creating internal stand off capabilities, mobility, and unique tactics. In order to give it much better flexibility, the Army would also have to look at developing heavy forces. This would allow it to move into View 1 operations where it could work with heavy forces in open terrain, something it would have difficulty doing at the present time. Moreover, some aspects of specialized light infantry and SOF would have to be far better integrated into tactical operations than is currently the case.

Notwithstanding the needed changes to make such a transition, the benefit would be a force structure that is far more versatile with little need to increase manpower. Properly designed, each capability could also stand on its own with minor adjustments.

If we truly live in a new age of warfare where a future shock will fundamentally change the force structures of the past, then we need to understand the effects. To do this, we need some new thinking on the problem. In this respect, the idea is not to put too much effort into looking at what the future holds or attempting to develop a better model for guessing future events. The solution is to look to the future with a firm understanding of the basic principles of warfare and how they have adapted to changes throughout history. Success in battle, like success after a future shock, is all about an organization's ability to anticipate and adapt. However, these two criteria are not equal. This is because failure to anticipate can be overcome by the ability to adapt.

## About the Author...

Major Balasevicius is a serving member of The Royal Canadian Regiment (RCR) a graduate of the Royal Military College. Upon completion of Staff College in 2002, he became the Deputy Commanding Officer of 1 RCR and in 2004 was posted to the Directorate of Land Requirements in Ottawa where he was the Project Director for the Army's Weapon Effects Simulation (WES) Project. He recently completed a posting as a member of the faculty (DS) in the Department of Applied Military Science at The Royal Military College and is now employed within the Director of Future Security Analysis at NDHQ. He has published numerous works on a variety of military subjects and has recently co-edited a book on Special Operations Forces.

## Endnotes

1. U.S. Department of Defense, *Joint Operating Environment: Trends & Challenges for the Future Joint Force Through 2030* (Suffolk, VA: United States Joint Forces Command, 2008), 2. According to this publication, "Trends are the direction and speed of change in important components of the international environment. A trend is a description of the way one of these components is changing, accelerating or decelerating. Trends document ongoing changes to components and allow us to imagine possible characteristics of a future operation environment. An example of a trend is that the U.S. share of the world economy is decreasing. Trends affecting the future operating environment are described in chapter two of this document."
2. Nathan Freier, *Known Unknowns: Unconventional "Strategic Shocks" in Defense Strategy Development* (Carlisle, PA: Peacekeeping and Stability Operations Institute and Strategic Studies Institute, U.S. Army War College, 2008), 2.

3. U.S. Department of Defense, *Joint Operating Environment: Trends & Challenges for the Future Joint Force Through 2030*, 3. The publication goes on to read, "Shocks can be sudden and violent, and are often unanticipated. They can also occur when a system passes a critical point and undergoes a phase change. This type of shock results from the gradual accumulation of change in a number of variables (e.g. increased violence and frequency of hurricanes as a result of rising ocean temperatures)."
4. Terry Pudas, "Trends and Shocks: An Alternative Construct for Defense Planning," *FederalTimes.com*, 14 May 2009, www.federaltimes.com/index.php?S=2752923 (accessed 19 May 2007).
5. Colin S. Gray, "The 21st Century Security Environment and the Future of War," *Parameters,* U.S. Army War College Quarterly (Winter 2008-2009) Vol. XXXVIII, No. 4,http://www.carlisle.army.mil/usawc/parameters/08winter/gray.pdf (accessed 2 May 2009), 14.
6. Alvin Toffler, *Future Shock* (New York: Random House, 1970), http://www.answers.com/topic/future-shock (accessed May 2009).
7. Ibid.
8. Freier, 2.
9. Ibid., 2.
10. Ibid., 5.
11. Ibid., 6.
12. Ibid., 7.13
13. Ibid., 7.14
14. Ibid., 8-9. "DoD's post-9/11 adjustment to counterterrorism (CT) and counterinsurgency (COIN) illustrates this point. Some of DoD's reorientation on CT and COIN was prudent and necessary, but also, at the same time, late and reactive. Without comprehensive net and risk assessment of future shocks, any defense adjustment based on yesterday's experience but nonetheless intended for tomorrow's unconventional demands could prove far off the mark downstream."
15. Major Bob Near, "The Joint Warfighting 2008 Conference, 17-20 June 2008," *The Canadian Army Journal*, Vol. 11.3 (Fall 2008), 148-149.
16. Ibid., 148-149.
17. Ibid., 148-149.
18. Pudas, 4-5.
19. Gray, 19.
20. Williamson Murray, MacGregor Knox and Alvin H. Bernstein, *The Making of Strategy: Rulers, States, and War* (Cambridge, England: Cambridge University Press, 1994), 1-3.
21. Dennis M. Drew and Donald M. Snow, *Making Strategy: An Introduction to National Security Processes and Problems* (Alabama: Air University Press, Maxwell Air force Base, 1988), 205. Nuclear warfare will not be considered within this paper.
22. In January 2001, the Canadian Army adapted the NATO vision of this construct when it published "*Future Army Capabilities*" and addressed a future operational environment that imagines two forms of conflict. See Canadian Department of National Defence, *The Canadian Army's Future Army Capabilities* (Kingston: Directorate of Land Strategic Concepts [DLSC] Report 01/01, 2002), 2.
23. Ibid., 2.
24. Ibid., 4.
25. Canadian Department of National Defence, *Land Operations 2021: Adaptive Dispersed Operations* (Kingston: Directorate of Land Concepts and Designs [DLCD], 2007), 6.
26. Canadian Department of National Defence, DLSC Report 01/01, 2-4.
27. Near, 148-149.
28. Ibid., 148-149.
29. Julian Paget, *Counter-insurgency Campaigning* (London: Faber and Faber Limited, 1967), 20-21.
30. Bard E. O'Neill, *Insurgency & Terrorism: Inside Modern Revolutionary Warfare* (Washington, DC: Brassey's, 1990), 13.
31. Paget, 20-21.
32. O'Neill, 13.
33. John McCuen, *The Art of Counter—Revolutionary War: The Strategy of Counter–insurgency* (London: Faber and Faber, 1966), 30-31.
34. O'Neill, 13.
35. The military arm provides a security force for the safe area and is also used as an offensive weapon to carry out larger direct attacks on the government and its forces.
36. O'Neill, 13-14. The term Guerrilla is borrowed from the Spanish *guerrilla* meaning *little war.* It has been used to describe small combat groups and the individual members of such groups.
37. Ibid., 13.
38. Ibid., 14.
39. Adding a fancy name to what is essentially a View 2 operation does little more than dangerously focus the fight into a small area when the attention should be on how it fits into the bigger picture.
40. A Hybrid attack between View 2 and 3 would likely be the threat of a nuclear terrorist attack or a

very limited nuclear exchange.
41. MC2 (AW) Nikki Carter, USJFCOM Public Affairs, "Commander Kicks Off Conference With Key Note Address" (Virginia Beach, VA: 12 May 2009), *News from USJFCOM*,http://www.jfcom.mil/newslink/storyarchive/2009/pa051209.html (accessed 12 May 2009).
42. Dr. Steven Metz, (biography) *Strategic Studies Institute, U.S. Army War College*, http://www.strategicstudiesinstitute.army.mil/pubs/people.cfm?authorID=22 (accessed 16 May 2009).
43. LGen Michael K. Jeffery, "Chief of the Land Staff Address to the Conference of Defence Associations (CDA)" (Ottawa: 28 February 2003).
44. Ibid.
45. Major Andrew B. Godefroy, ed., *Land Operations 2021: Adaptive Dispersed Operations - The Force Employment Concept for Canada's Army of Tomorrow* (Kingston: Directorate of Land Concepts and Designs [DLCD], 2007), 2.
46. Ibid., 2.
47. Ibid., 11.
48. Ibid., 18.
49. Ibid., 18.
50. Ibid,. 21.
51. Ibid,. 21.
52. Gray, 23-24. A recent example of this evolution in warfare was seen in Sri Lanka. A London Times article in May 2009 discussed the Sri Lanka Army's offensive against the Tamil Tigers and stated, "From a military perspective the campaign [Sri Lanka] of the past two years has been such a success that it is being studied by counter-insurgency specialists around the world…The army used guerrilla tactics—moving in small groups through the jungle rather than on main roads—while the Tigers fought a conventional campaign to defend their territory." See "Guerrilla tactics—how the Tamil Tigers were beaten in an 'unwinnable' war," *The Times* (*Times Online)*, 19 May 2009, http://www.timesonline.co.uk/tol/news/world/asia/article6315015.ece (accessed 20 May 2009).
53. For the purpose of this article, irregular forces are defined as militia, light infantry, and indigenous forces. Employment of light conventional forces could occur at the tactical level when indigenous forces are not available or have not been developed to the point where they are capable of carrying out operations.
54. Thomas M. Huber, ed., *Compound Warfare That Fatal Knot* (Fort Leavenworth: U.S. Army Command and General Staff College Press, 2002).
55. Ibid.
56. Ibid., 5. Huber does qualify this by stating, "Although the model of compound warfare offered here has been kept simple in hopes that it will serve as a convenient framework for analysis, readers should remember that enormous variety exists in the historical cases of compound warfare [CW]. As in most other realms of military thought, the theory is simple but the reality is complex. The CW model assumes that one side in a CW conflict uses CW methods and the other does not. In reality, both sides may use CW methods. In most historical cases of compound warfare, one side uses CW methods predominantly; the other side deliberately uses them to the extent it is able. The model assumes two kinds of force, regular or conventional force, and irregular or guerrilla force. Several types of mobile regional militias may fall between these two poles and may contribute importantly to the leverage of the CW operator. In other words, various intermediate types of force are possible between the regular and irregular models promulgated here for simplicity."
57. Ibid., 2.
58. It should be pointed out that from a historical perspective; compound war has often been used by weaker forces to provide them with an advantage over larger and stronger armies. This is a fact that should be of interest to modern western forces that are reducing their overall numbers in an attempt to substitute technology for "boots on the ground."
59. Gérard Chaliand, *Guerrilla Strategies: An Historical Anthology from the Long March to Afghanistan* (Berkeley: University of California Press, 1982), 1-32.
60. Huber, 312. Huber makes it clear that "Accordingly, an important feature of the analytical framework of compound war is that although it informs and illuminates, this volume makes no claim that it is a quantitative or predictive model—at least not in terms of the scientific experimental method. Despite its utility in defining a historically significant pattern of warfare, it does not function well as a rigid template. Rather, it must be understood as a flexible framework that comfortably incorporates innumerable additional variables such as geography, social forces, culture, intensity of motivation, and the role of personalities which shape both the course and outcomes of events."
61. Bernd Horn, *Forging a Nation: Perspectives on the Canadian Military Experience* ( St. Catharines: Vanwell Publishing Limited, 2002) 46-47.
62. Michael D. Pearlman**, "**The Wars of Colonial North America, 1690-1763," in Thomas M. Huber, ed., *Compound Warfare That Fatal Knot* (Fort Leavenworth: U.S. Army Command and General Staff College Press, 2002) 39-40.
63. Huber, 92. He does acknowledge that "Analysts calculate membership in Spanish guerrilla

bands to have been about 50,000. Even if these are added to Wellington's conventional force, the French still enjoyed a favorable force ratio of almost 2.2 to1." Also, see "Wellington in the Peninsula," 155-65, and "Wellington and the Guerrillas," 166-80, in David G. Chandler, *On the Napoleonic Wars* (London: Greenhill, 1994).

64. In general, irregular forces would be responsible for controlling as much of the area of operations (AOO) as possible. Once this has been secured, their primary mission would be to continue gaining and securing new ground. In so doing, they would provide much of the framework for ADO in its current construct. Medium and or heavy forces would be superimposed onto this construct. These forces could set the conditions for irregular operations by securing key objectives. Initially, synthetic irregular forces, such as light infantry could be used. More importantly, this new doctrine would allow irregular and light forces to continue dispersed operations while medium and heavy forces would concentrate to fight a separate aggregated operation. If such an operation needed to be sustained, the positional strength that has been achieved through the actions of dispersed forces could be brought into play.

65. Hamdy Abouseada, *The Crossing of the Suez Canal, October 6, 1973 (*Carlisle Barracks, PA: U.S. Army War College, 2000) 10.

66. U.S. Department of Defense, *Joint Publication 3-05—Doctrine for Joint Special Operations* (Washington: 17 December 2003), II-11.

67. *Bernd Horn, "*Strength Born From Weakness: The Establishment of the Raiding Concept and the British Commandos," *Canadian Military Journal*, Vol. 6, No. 3 (Autumn 2005).

68. The creation of the Commandos was significant because other British SOF organizations that appeared during the war, such as the Special Air Service (SAS) and the Special Boat Service (SBS), owe their origins in one way or another to the Commandos.

69. Although the basic fighting skills on foot are fundamental to all soldiers, light forces need far more developed levels of physical fitness, small arms training, close quarter battle skills, and field and battle craft skills than their mounted counterparts. This is especially true for specialized light units. In order to provide a baseline for the capability, the former Canadian Airborne Regiment needed to draw from the top 70% of the Army while the Canadian Special Operations Regiment (CSOR) takes recruits from the top 30% to fill their ranks. More importantly, in order for light forces to properly employ their standoff capabilities and unique mobility requirements, developers must consider the possibility of creating different but complementary fighting techniques for light forces.

70. Special Operations Forces (SOF) are organizations containing specially selected personal that are organized, equipped and trained to conduct high-risk, high-value special operations to achieve military, political, economic and information objectives by using special and unique operational methodologies. See Department of National Defence, *Canadian Special Operations Forces Command: An Overview*, (Ottawa, 2008), 7.

71. The exceptions to this statement include psychological operations and information operations, which owe their origin to the Special Operations Executive (SOE) and the Office of Strategic Services (OSS).

72. Max Boot, senior fellow in national security studies with the Council of Foreign Relations, "Statement to The House Armed Services Subcommittee on Terrorism, Unconventional Threats, and Capabilities," 29 June 2006. He goes on to state that "there is widespread concern within Army SF circles that their 'softer,' but no less vital, missions are being shortchanged by SOCOM in favor of sexier SWAT-style raids. One recently retired SF colonel wrote to me a few weeks ago: 'The current problem with SOCOM is that it is unbalanced. Most of the leadership and planning staff have come from the DA [Direct Action] side. They have no understanding of UW [Unconventional Warfare]. To the degree that they are starting to develop an appreciation for it, it is only as an enabler for DA operations.' In other words, they want to cherry pick techniques developed to wage unconventional war and use them to support conventional commando operations."

73. Ibid.

74. U.S. Department of Defense, *Doctrine for Joint Special Operations Joint Publication 3-0517* (Washington: December 2003), 2-7.

75. Ibid, 2-7.

# RED DAWN: THE EMERGENCE OF A RED TEAMING CAPABILITY IN THE CANADIAN FORCES

**Matthew Lauder**

The concept of red teaming, as it is most broadly understood (i.e. as a challenge function meant to improve blue force performance), is not new; and the use of red teams by the public and private sectors, including the defence and security community, are well documented. For example, red teaming is used by the emergency management community to test the skills of emergency responders during exercises (e.g. against a role-played adversary, such as terrorists), as well as to evaluate the efficacy of emergency response plans. Likewise, red teaming is used by the private sector to evaluate protective systems, including synthetic and physical security networks. However, while there is a legacy of red teaming, in particular in military war-gaming, it remains a developing and evolving concept with numerous definitions, many of which are context-dependent and user-specific.

In fact, red teaming, at least in its current iteration as a decision-support challenge function, has only recently gained traction in the military community. For example, the U.S. Army, after several years of developing and formalizing the red teaming concept, stood-up the Army Red Team Leader (ARTL) course at the University of Foreign Military and Cultural Studies (UFMCS), Fort Leavenworth, in 2006. This course trains military members, usually senior commissioned and non-commissioned officers, to assume and play the role of *the Other* (i.e. a mission-specific adversary) so they may challenge planning assumptions, identify red and blue vulnerabilities, and propose alternative courses of action. For the U.S. Army, red teaming is used exclusively as a decision-support tool for the commander with application limited to planning environments.

Unlike the U.S. military, the Canadian Forces (CF) does not have a program to train red team members in the proper application and utility of the function, nor has it formalized the concept in doctrine. In fact, much of the red teaming performed in the CF is ad hoc and heuristic; and red teams, comprised largely of blue force members tasked to role-play the adversary, are typically assembled at the last minute to meet the needs of the training audience. Most red teaming in the CF has been used in training environments and largely limited to exercises. In other words, red teaming in the CF is applied in a largely haphazard and casual fashion, and a strategy to formalize the concept, and professionalize the activity for application in training, planning, and operational environments, has been absent.

However, the state of red teaming in the CF is about to change. Owing largely to the success of the ARTL course, red teaming has become a hot topic and is receiving significant attention in the Canadian defence and security community. As a result, efforts, albeit nascent, are underway to explore, formalize, and professionalize both the concept and the capability in the CF.

This article has two goals: (1) to briefly identify and explore examples of red teaming from across the private and public sectors; and (2) by drawing upon these examples, to outline the characteristics of red teaming and propose an integrated, and working, definition of red teaming for possible use by the CF.

## Opposing Force-based War-gaming

In the context of war-gaming, in which at least one player portrays or serves as the adversary (i.e. opposing force, or OPFOR), red teaming is not a new or recent development.[1] To test or preserve strategy without experiencing the hazards of combat, OPFOR-based war

games, in various forms, date back to the second and third millennium BC. For example, Wei-chi, literally the "surrounding game," dates to approximately 2,200 BC in China. Similar to chess, although the goal of the game was to defeat the adversary by capturing space on the board, Wei-chi was played by generals and statesmen and is reputed to have influenced the development of Chinese military tactics. The origin of contemporary forms of strategic OPFOR-based war games dates to the early 1800s with the development of *Kriegspiel* (literally, "war game"). Developed by George Heinrich Rudolf Johann von Reisswitz, a Prussian military officer, Kriegspiel, which is played using miniatures on a sand table, helped to train Prussian military officers and is, at least partially, credited for the Prussian victory over the French in the Franco-Prussian War (1870-1871). This tradition of war-gaming continued into and throughout the twentieth-century; one of the most notable being the war-gaming of defensive strategies by the staff of the German Fifth Panzer Army in the fall of 1944 using real-time reports from the field.

In the contemporary period, OPFOR-based war-gaming has taken the form of live blue-on-red (force-on-force) exercises and simulations. For example, the British Army developed a training program, under the auspices of the British Army Training Unit Suffield (BATUS), which includes a well-trained, aggressive, and independent (i.e. free-thinking) OPFOR based upon a non-British, all-arms battalion-sized organization. With a focus on genuine force-on-force training against a capable and mission-specific OPFOR, BATUS, which is located at CFB Suffield, includes more than 200 permanent and 640 temporary staff. Realism is further enhanced in force-on-force exercises through the use of direct and area weapons effects simulators, such as laser or infra-red projectors and marker systems (simulated ammunition). However, it should be noted that force-on-force training exercises are not limited to the British military; rather, they have been emulated by militaries around the globe. This same approach is used in the U.S. military and has recently been adopted by the CF for use at the Canadian Manoeuvre Training Centre (CMTC).

Contemporary OPFOR-based war games are not limited to the physical realm. Advancements in computer technology have led to the development of highly detailed virtual-world and immersive environments. The U.S. Army created the Dismounted Battlespace Battle Lab (DBBL), which allows soldiers to enter an immersive environment (i.e. a virtual battlefield) and manoeuvre through a variety of challenging situations while interacting with simulated adversaries. The primary emphasis of these force-on-force synthetic training environments is to develop and enhance tactical behaviours (i.e. improve individual battle task standards) for soldiers, and to examine how soldiers move and conduct themselves on the battlefield. These immersive and networked environments, which can accommodate up to 13 soldiers in individual virtual simulators, allow soldiers to interact with each other (as they would in the real world) and come complete with dynamic physical and human terrain features, including simulated adversaries and civilians. Other immersive training environments, such as ELECT BiLAT (developed by the Institute for Creative Technologies), focus on the soldier's *social interaction* with synthetic agents in a virtual world. Referred to as a social simulation, the objective of the training environment is to provide participants an opportunity to practice interpersonal skills such as negotiation and issue recognition. In the immersive environment, participants assume the role of a U.S. Army officer who must conduct a meeting with local leaders to achieve mission objectives or collect information on social relationships among the characters.

But, the question must be asked: Are OPFOR-based war games and simulations, such as those outlined above, examples of red teaming? Or, is red teaming something more than merely pitting blue and red forces against each other in an exercise or training environment? I will return to, and hopefully answer, these questions later in this paper.

## Some Examples of Red Teaming from the Public and Private Sectors

Although red teaming is a term commonly used across the public and private sectors to identify, in very broad terms, a type of challenge function (e.g. to challenge a skill or a plan),

red teaming is not applied in a common or consistent fashion across the sectors. To work towards a common and more focused understanding of, and approach to, red teaming, the various applications of the concept (i.e. red teaming as it is most broadly interpreted and applied) must first be identified and briefly examined.

## Civilian Applications

Jack Davis, of the Sherman Kent Centre, an institute of the Central Intelligence Agency, uses the term *red team* to denote a specialized team comprised of external, "substantive" (i.e. area) experts and analytical thinkers, who "work with [intelligence] analysts to study assumptions, mirror-imaging, and complex analytical processes."[2] For Davis, red teams role-play the adversary's calculations. It should be noted that Davis refers to the overall activity as *alternative analysis*, but not as red teaming. Davis does, however, identify red teaming as a technique, along with *Devil's Advocacy* (i.e. the deliberate challenging of an analyst's views) and *Team A-Team B* analysis (i.e. competitive assessments using a different set of assumptions), used under the umbrella of alternative analysis (i.e. red teaming, along with Devil's Advocacy and Team A-Team B analysis, is a specific type of challenge technique that falls under the broader category of alternative analysis).[3]

In the context of information systems security, Sandia National Laboratory, a national security laboratory of the U.S. Department of Energy, refers to red teaming as an "assessment" that considers malevolent intent rather than system design or structure, and the application of that knowledge, by a specific team of role players (red teams), to test the weaknesses and vulnerabilities of information systems.[4] For Sandia Labs, red teaming is the activity that involves ethical (i.e. white hat) hacking from a *black hat* perspective, using hacker personality templates (i.e. adversary behavioural templates). Black hat hacking is a colloquial term to describe malevolent hackers. White hat (i.e. ethical) hacking involves penetrating a computer system using the techniques, approach, and intent of malevolent hackers. However, the goal of the ethical hacking is to identify security vulnerabilities and to leave the system intact. Likewise, the National Security Agency (NSA) developed a specialized red team that provides adversarial network service (e.g. network security penetration analysis). The purpose of the NSA's red teaming effort is to assume the mindset of the adversary and penetrate a synthetic network undetected and identify security gaps so that the customer (i.e. the client) can take appropriate defensive measures. A spokesperson for the NSA notes that the first rule of red teaming is to "do no harm," and that the perfect *red teamer* possesses "technical skills, an adversarial mindset, perseverance, and imagination."[5] Similarly, IBM describes red teams as a highly specialized group of people assigned with the task of assuming the "role of the outsider" and challenging assumptions, examining systems for unexpected outcomes, proposing alternatives or new approaches, or identifying vulnerabilities of new ideas or approaches.[6] For IBM, the critical characteristic of red teaming is that the teams are able to assume an "adversarial posture, taking the perspective of the enemy or competitor."[7]

Although not restricted to synthetic networks, similar penetration tests are conducted by the Forensic Audits and Special Investigations Team (FSI) of the U.S. Government Accountability Office (GAO).[8] Created in 2005, the FSI conducts covert evaluations of executive branch security systems and government program activities to identify vulnerabilities and internal control weaknesses that could be exploited by terrorists or criminals. These covert evaluations are conducted as "red team operations," meaning that the team adopts the capabilities, resources, and mindset of the adversary (i.e. they behave as the adversary would), and that the target of the investigation is completely unaware (i.e. not notified in advance) of the test.[9] Moreover, these evaluations occur in the actual work environment during normal operational periods; meaning that they do not take place in a simulated or replicate environment, nor are they exercises or training events. In other words, these are live red teaming events.

## Military Applications

John F. Sandoz, of the Institute for Defence Analysis, describes red teaming as a "management tool" to "challenge assumptions" and "avoid group-think."[10] Likewise, the UFMCS defines red teaming as "a function … that provides commanders with an independent capability to fully explore alternatives in plans, operations, concepts, organizations and capabilities in the operational context" from a range of perspectives (e.g. partners, adversaries, and others).[11] For the UFMCS, the goal of red teaming is to enable planners and decision-makers to avoid group-think, mirror-imaging, and cultural miscalculations. Susan Craig, a recent graduate of the UFMCS Red Team Leader course,[12] describes a red teamer as "not an intelligence analyst," but rather like a historian and anthropologist, possessing excellent communication skills and ready to question assumptions and voice dissent.[13] Moreover, Craig notes that red teamers understand how the blue force shapes the environment, and examines those attempts (by blue force) to shape the environment through the "lens of the adversary."[14] In other words, red teaming is about accessing and utilizing the adversary's culture and world view and seeing blue (i.e. *the Self*) through the eyes of red (i.e. *the Other*).

Although most practitioners agree that red teaming is a type of challenge function, there is some disagreement on the level of application within an organization. For example, the U.S. Defense Science Board Task Force report on red teaming indicates that red teams can be employed at "multiple levels within the enterprise," specifically: (1) the strategic level to challenge assumptions and vision; (2) the operational level to challenge force postures and plans; and (3) the tactical level to challenge military units during collective training.[15] In contrast, Colonel (retired) Gregory Fontenot, the Director of UFMCS, and Colonel T.G. Malone and Major R.E. Schaupp expects red teaming to be used exclusively as a planning and decision-support tool (i.e. red teaming is about developing a more robust plan at the operational or strategic levels).[16] At least as far as the UFMCS is concerned, the purpose of red teaming is to assist the commander, and the staff, in planning and operations by providing alternative, and holistic, perspectives and insights, in particular from the adversary's point of view or by taking the cultural nuances of the operating environment into consideration. It is unknown as to whether the U.S. Army intends to utilize red teaming at the tactical level, or outside of the planning and decision-support role (e.g. role-playing the adversary in war games or exercises). However, it appears that red teams, in so far as the U.S. Army is concerned, do not actually *play OPFOR* in war games or exercises.

## Red Teaming in the Canadian Forces

Unlike the U.S. military, red teaming (again, broadly defined) in the CF is done in a much more informal and irregular manner, and more often in a tactical-training setting. For example, The Argyll and Sutherland Highlanders of Canada (Princess Louise's), a reserve infantry unit, developed a dedicated team which, in collaboration with the blue-force commander, designs field training exercises, trains the OPFOR to accurately represent and role-play adversaries and neutrals (and other agents found in the operating environment), serves as exercise controllers and key role-players (e.g. insurgent leaders), and provides feedback on performance and identifies opportunities and areas for improvement. The purpose of this red teaming effort is two-fold. First, it is to accurately represent the adversary and other agents, in this case insurgents and civilians, in order to challenge blue's assumptions about the human terrain, in particular culturally-specific behaviour. Second, it is to create a physically and psychologically challenging learning environment; one which challenges, but not overwhelms (i.e. breaks), the primary training audience.

Another example is the CMTC, which employs both military members and civilians to role-play adversaries and neutrals (including religious leaders, local politicians, and aid-workers) during pre-deployment training for Afghanistan. However, it should be pointed-out that, while military role-players receive some training in Afghan culture and Taliban tactics, and many of the civilian role-players are native-born and speak languages indigenous to Afghanistan, the red teaming effort, in this instance, is exclusively applied to

the collective training environment for individual battle task standards and not to planning or operational decision-support.

Red teaming has also been used by the CF for major event preparation, specifically by the Joint Task Force Games (JTFG) Red Team[17] during command group table-top exercises (e.g. red team TTXs) in preparation for the 2010 Winter Olympics. Red Team TTXs are a specific type of TTX exercise in which the red team designs, coordinates, and conducts the exercise. The purpose of these TTXs is to create and maintain an environment of open and candid discussion of existing or emerging issues, challenges, and concerns. Most importantly, red team TTXs allow the command group, or senior decision-makers, to discuss and think-through a number of novel issues in a *team environment* and to contemplate and consider the various cascading effects or downstream consequences of blue and red actions. It should be noted that team involvement is essential to this endeavour. Not only should the entire team be present, including the commander or senior decision-maker, but the exercise should allow for open, candid, and non-hierarchical discussion between team members.

Led by a facilitator, red team TTXs may take the form of a series of scenarios, which are usually framed by the upcoming event or operation and gradually increase in difficulty or complexity. The role of the facilitator is to solicit and maintain group discussions, as well as to keep the blue force focused on the larger context and strategic issues and directed towards a particular end-state or goal. Red team TTXs are characterized by a "push" red-blue relationship. In essence, the red team is actively engaged in the entire TTX and pushes blue to think about a particular issue in a particular manner. In this situation, red *pushes* information to blue for consideration. (In red team supported TTXs, whereby the red team supports the decision-making process, the relationship between red and blue is much more "push-pull." For example, red could push information to challenge blue assumptions, or blue could request assistance or support from red). Moreover, the facilitator does not play the role of neutral observer (which is typical in TTXs), but rather plays the role of agent-provocateur (i.e. an inciting agent). In fact, there is nothing neutral about the role of facilitator in this type of red teaming exercise. This, however, does not mean that the facilitator plays the role of *contrarian* who purposely assumes a combative, confrontational, or oppositional stance. (In fact, to do so would create a negative learning environment). Rather, the facilitator plays the critical role of guiding the training audience to a particular end state (the end state or goal of the red team TTX must be negotiated and agreed upon by the facilitator and the blue commander), and ensuring that the training audience remains objective and does not engage in group-think or mirror-imaging. This is achieved through the selective use, or manipulation, of information. In other words, the role of the facilitator is to influence and guide discourse and to help blue achieve the end state.

To avoid the blue force rejecting the facilitator, or dismissing the scenarios as unrealistic, it is important that the commander both sanction the red teaming effort and play the role of confidant during the exercise. That is, the commander will be a trusted (i.e. inside) agent and will assist the facilitator, through clandestine or subtle means (e.g. unobtrusively re-directing conversation or supporting the points made by the facilitator), by guiding the discussion towards the end state. It is also important that the facilitator and the confidant work cooperatively to nurture and maintain a positive, constructive, open, and egalitarian setting.

## Synthesis of Red Teaming Approaches

Although this examination is not exhaustive, it provides an overall idea of what red teaming is and how it is applied across the public and private sectors. In general, civilian applications tend to use red teaming on the tactical level (in particular, but not exclusively, to test physical or synthetic networks, systems, or operational programs), whereas military applications tend to be employed on the operational and strategic levels, and largely within a planning setting or in a decision-support role (although, in the CF, red teaming appears to be most often utilized in exercise or training environments). It is clear that, while application of the red teaming concept may differ across sectors, both the civilian and military communities

utilize red teaming in an *active*, rather than a *passive*, fashion, and that red teamers must possess a deep understanding of the adversary (i.e. thinking and behaviour) for the purpose of role-playing the adversary (or, advising as to what the adversary may think and do) in training, planning, or operations (i.e. live) setting. Moreover, it is apparent that red teamers must see themselves as integral parts of the learning process; that they play a critical role in making blue better.

## Why is Red Teaming Important?

There are two interrelated reasons why red teaming is important.[18] First, red teaming mitigates complacency, group-think, and mirror-imaging (i.e. imposing blue force behaviours and tactics on the adversary; in other words, seeing the adversary as we see ourselves).[19] Second, red teaming is a process by which blue force may be able to deepen its understanding of, and therefore the ability to respond to, the adversary.[20] This is particularly important in the contemporary security environment, which is characterized by multiple, relatively unknown, dynamic and highly-adaptable adversaries (in particular, but not limited to, non-state actors possessing asymmetric tactical advantages used against conventional forces and civilian populations) in non-contiguous battlespaces. In essence, we now face multiple adversaries that operate across international boundaries and in an unorthodox fashion, adopting and modifying military doctrine from a range of militaries, or dispensing with convention altogether, in an effort to gain an advantage over technologically and numerically superior opponents. As such, this situation requires the blue force to acquire a deep understanding of the mindset, behaviour, and culture of the adversary, as well as a level of self-knowledge to critically examine and identify the vulnerabilities and weaknesses in blue force networks, systems, approaches, activities, programs, thinking, and plans (i.e. to be introspective; to look from within). The purpose of red teaming is to deepen our understanding of ourselves and of the adversary and, by doing so, open our eyes to our own stereotypes and weaknesses; in other words, to see the world from outside one's own experiences.

## Red Teaming Conceptual Framework

In a recent article, Mark Mateski, who attempts to balance the use of red teams by the military community with that of the larger public and corporate sectors, defines red teaming as "any activity—implicit or explicit—in which one actor…attempts to understand, challenge, or test a friendly system, plan, or perspective through the eyes of an adversary or competitor."[21] Although recognizing that various approaches to red teaming are used across sectors, Mateski notes that red teaming generally serves one of four purposes (i.e. to understand, anticipate, test, or train) and further indicates that these purposes are cumulative, each building upon the previous purpose. Mateski also separates the purposes into two broad categories or approaches; that of *passive*, the other *active*. Mateski notes that the primary difference between these two broad categories is that active approaches "play-out" adversary actions against a blue force in an operational (i.e. live) setting; and he further notes that red teaming, in the active approach, "tends to more interactive than passive."[22]

Although Mateski's framework provides a detailed account of various ways in which red teaming is used across sectors (e.g. in military and corporate planning versus exercises and penetration tests), there are two critical issues that must be highlighted. First, Mateski's identification of passive versus active approaches to red teaming appears to run counter to the generally-accepted purpose of red teaming (i.e. to challenge conformity, convention, and orthodoxy and to encourage self-discovery and learning, red teaming requires high levels of interactivity and exchange between red and blue forces). Red teaming, by its very nature, is a collective, and therefore social, activity which implies a level of cooperation, interactivity, and reciprocity. Second, Mateski's assertion that purposes are sequential and cumulative (i.e. building upon the previous purpose) does not reflect red teaming in the applied environment. For example, tests and evaluations, such as the penetration or probing of blue systems or networks, in addition to teaching blue to understand and anticipate red patterns of activity, prepare blue to respond to red actions (i.e. both teaches and trains countermeasures). Rather than having a cumulative effect, I argue that the various purposes (i.e. to help blue understand, anticipate, test, and train) exist across all red

teaming activities; that is, every time you red team, a combination of purposes and functions are realized.

Recognizing the various manifestations of red teaming across the public and private sectors, and the levels of application (i.e. tactical, operational, and strategic), I argue that the basic purpose of red teaming is to create a *collaborative learning environment*.[23] At its very core, red teaming is about learning; not only about *the Other*, but also *the Self,* in a participatory and interactive fashion. In essence, an effective red teamer is, first and foremost, a coach or mentor; that is, one who instructs and teaches while strategically directing the team towards a specific goal.

Taking into consideration red teaming applications from across the public and private sectors, as well as the basic purpose of red teaming, the following table (Table 1) provides a description of red teaming categorized by four broad and generic organizational processes (i.e. Innovation, Planning and Analysis, Training and Professional Development, and Operations).

| Organizational Process | Description | Method / Technique | Example |
|---|---|---|---|
| Innovation | • Policy, concept, program, or product development leading to transformation | • Peer review / critical analysis<br>• Experimentation | • Red teams test the validity and applicability of a new concept |
| Planning and Analysis | • Plan design and development, and predictive intelligence analysis | • Peer review / critical analysis<br>• Alternative analysis / what-ifs<br>• Team B approach<br>• Devil's advocate<br>• Advisory role<br>• Adversary role playing (surrogate adversary) | • Red teams assess the vulnerabilities of a plan by role playing the adversary during war-gaming<br>• Red team advises planners during design phase of adversary capabilities and limitations |
| Training and Professional Development | • Individual and collective training, typically in an exercise environment | • Adversary role playing in a blue versus red environment<br>• Advisory role<br>• Peer review / critical analysis (e.g. during after-action reviews) | • Red teams design and coordinate training exercises, as well as role play all agents in the exercise scenario<br>• Red team can play a support role in exercises, serving to challenge or advise blue when necessary |
| Operations | • Assessment of live / operational (cyber or physical) activities, systems or networks (e.g. computer networks, physical access systems, or environmental security elements of critical infrastructure or other asset) | • Tiger teams (red versus blue)<br>• Ethical hacking (white and black hat hacking)<br>• Peer review / critical analysis (attack the whiteboard) | • Red teams conduct penetration tests of a live or replicated computer network, or tiger teams attempt to gain entry into secure areas of a physical asset (e.g. airports, military bases, etc.) |

**Table 1: Red Teaming Conceptual Framework**

## Characteristics of Red Teaming

The use of red teaming is based upon client needs, available resources, and the context of the operating environment. As evidenced by the various manifestations of red teams across the public and private sectors (i.e. multiple horizontal and vertical applications), there is no single definition of, or format for, red teaming. As such, I believe it necessary to resist the urge to be overly prescriptive in the definition, purpose, doctrine, and the application of red teaming, even if the application is limited to the military environment within a specific context (i.e. limited to planning or training settings). We must be able to provide enough space for the concept to be useable in a variety of settings (so that we do not marginalize the military community from wider application of the concept, especially the civilian public and private sectors)[24] and for the red teaming concept to develop further so that it may respond to the changing security environment (i.e. emerging technologies or adversary capabilities). In other words, red teaming should not be a considered a static or single-purpose capability; rather, red teaming implies dynamic application across settings, organizations, and levels. Moreover, red teaming implies multifaceted representation (i.e. multiple adversary or agent perspectives) and a capability that can be utilized to respond to a range of problem-spaces (e.g. not just for counter-insurgency operations). It is for these reasons (i.e. to emphasize its multi-setting, multi-level application and the need for future development) that red teaming should remain, above all else, a highly flexible concept and an adaptive capability in the CF.

From an examination of red teaming initiatives from across a range of settings, the following table (Table 2) lists, what I believe to be, the six key characteristics of red teaming.

| Characteristic | Description |
|---|---|
| Trust | The effectiveness of red teams will be dependent upon building a level of rapport, trust, and credibility with blue force members. Without trust, the blue force will dismiss red involvement in planning activities, decision-support, and exercises. Red team members must develop trust in order to create an environment of joint-ownership. Blue members must be able to trust that red teamers are there to help and guide (i.e. do no harm), rather than to overwhelm, unfairly criticize, or break blue efforts. |
| Positional Authority | To ensure buy-in, the blue commander must sanction the red teaming effort and must make blue members aware that the red team functions at the highest level. |
| Relative Independence | Strict independence of the red team is only required in special circumstances. Red team performance and activities should be continually negotiated between the red commander and the blue commander to ensure that the experience is of value to blue (i.e. that red teaming remains a high-value training aid). |
| Expertise | Red team members should have a deep understanding of the human and physical terrain of the operating environment (in particular, the adversary, including adversary thinking, behaviour, culture, etc.), knowledge of alternative and adult learning methods, and advanced knowledge of the blue force, including blue thinking, behaviour, culture, and the system, product, program, or activity being examined. |
| Adaptability | Red teams must play a role that is fully immersive and participatory (active rather than passive) and that they should be permitted to adapt to, and counter, blue force actions, as appropriate. To ensure learning value, red teams and the blue force must continually interact and negotiate continued participation. |
| Flexibility | Red teams should be used in a variety of settings (functions) at all levels (tactical, operational, and strategic), and in response to a range of problem-spaces. |

**Table 2: Red Teaming Characteristics**

## Integrated Definition of Red Teaming

Based upon the conceptual framework (Table 1) and the key characteristics (Table 2), the following integrated and working definition of red teaming is proposed for use by the CF:

*Red teaming* is an organizational process support activity undertaken by a flexible, adaptable, independent, and expert team that aims to create a collaborative learning relationship by challenging assumptions, concepts, plans, operations, organizations, and capabilities through the eyes of adversaries in the context of a complex security environment.

This definition, although developed with the military community in mind, provides significant latitude for use by the civilian community across the public and private sectors. Moreover, the definition allows for use at all levels (i.e. tactical, operational, and strategic) and across all organizational processes (i.e. depth and breadth of processes; see *Table 1*) rather than for use by a single community in specific setting, such as planning or operational decision-support, and for a specific problem-space. Lastly, this is a *working* definition because it is recognized that, as our experience and knowledge of red teaming develops, the definition will evolve and mature.

### Preliminary Observations from the Field

At present, there is very little systematic research being conducted on red teaming. However, a few preliminary observations from red teaming activities are worth mentioning. First, anyone can be a critic or a contrarian and disagree with a particular position and put forth an opposing viewpoint, but not everyone can be an effective red teamer. Red teaming takes a particular type of individual, mind-set, and approach. Most importantly, red teamers must be able to *check their ego at the door*. The finished product of red teaming, whether that product is a robust plan or an enhanced skill-set, is not about the red teamer; that is, the red teamer does not have ownership of that product. Rather, the goal of the red teamer is to help blue learn and improve. To do this, red teamers must be sociable, gregarious, likeable, perceptive, empathetic, understanding, and have a balanced personal-touch (i.e. know when to push or advocate for an issue and when to lay-off). Furthermore, red teamers must be able to recognize the limits of their knowledge and experience and seek additional expertise, whether that is an indigenous asset or an external subject matter expert, when appropriate. Red team members must possess and maintain credibility throughout the entire red teaming endeavour.

High-level or strategic red teaming (e.g. for command personnel or persons in senior leadership positions) appears to be a good add-on or augmentation to existing exercises and training programs rather than as a substitute. In essence, the red teaming activity (e.g. a red team TTX) allows for greater discussion of pre-existing or emergent issues and challenges. Although not a hot-wash or after-action review, red team TTXs allow the participants to take issues (that are identified during a larger exercise) and to think through the problem-space and consider alternative options and courses of action (which were not used in the larger exercise). Red team TTXs appear to be most valuable when conducted in an intimate and impartial setting, and towards the end of, or immediately following, an exercise (but before a hot-wash) when memories are fresh and information and resources are readily at-hand.

So, to return to my early question: Are OPFOR-based war games and simulations examples of red teaming? The short answer is: *It depends*. In essence, it depends upon how well-trained or knowledgeable the OPFOR is in adversary culture and behaviour, how war games and simulations are structured (i.e. are they interactive and collaborative learning environments), and whether the OPFOR is attempting (first and foremost) to challenge preconceived ideas, assumptions, or concepts rather than to simply defeat or crush the opposition (i.e. blue). In the broadest interpretation of the term, OPFOR-based war games (i.e. simple blue versus red events) can be considered a form, albeit a basic form, of red

teaming; but the key to red teaming, at least as it is conceived in the contemporary operating environment, is about creating opportunities to self-reflect (i.e. gain self-knowledge) and to improve blue performance through an accurate representation of the adversary as well as an accurate perception of the blue force through the eyes of adversary. In other words, if the role of the red team (in war-gaming or during the planning process) is to simply antagonize, criticize, castigate or defeat (or even to validate) blue, then these activities are less red teaming endeavours and more banal competitions (i.e. there must be learning value associated with the endeavour). The danger of competitions is that it often creates a negative learning environment. The overall objective of red teaming is to maximize learning in order to enhance performance.

To that end, I believe that there are two general forms, or categories, of red teaming: basic; and advanced. Basic red teaming usually involves a role-played adversary; and, while there may be some learning value associated with basic red teaming, the learning agenda is informal and relatively unstructured. For example, simple competitions between blue and red forces in an exercise environment may be regarded as a basic form of red teaming. In contrast, advanced forms of red teaming involve experts who not only role-play the adversary (or look at a problem from the adversary's perspective) but who purposively create and maintain a learning environment that is both well-structured and highly formalized. Moreover, advanced red teaming is characterized by set goals and learning objectives (i.e. a particular end state that is negotiated by blue and red commanders). It should be noted that advanced red teaming is not exclusive to planning environments or the operational and strategic levels; that such learning environments can be created at the tactical level and in exercise environments.

## Areas for Further Investigation

Although a number of articles have been written on the topic of red teaming (in particular, in military and defence publications), and red teams have been put into use across the public and private sectors, there is a paucity of data on the effectiveness of red teaming to achieve specific goals (i.e. there are no studies validating the effectiveness and efficacy of red teaming as a process). In fact, much of the literature on red teaming is anecdotal and descriptive, focusing, from a practical perspective, on best-practices or approaches to applying the concept by a specific community and in a specific context (i.e. by the military in a planning setting). The following are a number of areas that require further investigation:

- What are the qualities and characteristics of good and effective red teamers and how are red teamers selected?
- What type of training is required for red teamers?
- Is there a particular red team composition that is more effective than others?
- What kind of learning environment is most effective?
- Does the role of the red team differ in certain environments (i.e. does the role differ across settings and levels)?
- What type of interaction is necessary (between red and blue) to encourage learning?

Does red teaming really work? We assume that red teaming makes blue better (i.e. more robust plans or more effective soldiers), but does it really? Is there evidence to support the claim that red teaming actually improves plans or behaviour? Some evidence suggests that red teaming may be a barrier to learning because participants revert to a competitive approach aimed at short-term gain (in spite of the overalls goals or content of the course).[25]

## Conclusions

The concept of red teaming is neither new nor is it commonly applied across the public and private sectors. For the civilian community, red teaming is often, but not exclusively, used to test physical and synthetic networks and systems, such as security and information systems, at the tactical level. In contrast, red teaming is commonly used by the military community at the strategic and operational levels and within a planning setting (although there are examples of both tactical level and training applications), largely to challenge assumptions. In essence, red teaming is an evolving concept, tailored to meet the specific needs and environment of the end-user. A cross-sector examination of red teaming reveals it is used in four broad organizational processes:

- innovation;
- planning and analysis;
- training and professional development; and
- operations.

In addition, this cross-sector examination reveals that red teaming, regardless of the level or setting of application, involves a specially trained team that assumes the role of (or can at least speak to the thinking and behaviour) the adversary. This role-playing requires a deep understanding of the mindset, behaviour, and culture of the adversary. Most importantly, the examination also reveals that the purpose of red teaming is to facilitate collaborative learning. Since red teaming has broad (i.e. horizontal and vertical) application across the public and private sectors, and since the CF have entered an era of deep civilian-military integration (in particular, in response to emergencies and humanitarian crises), it is recommended that the military develops an inclusive and agile red teaming framework with flexible and adaptable guidelines for the application of a red teaming capability at all levels and across the four organizational processes.

## About the Author...

Matthew A. Lauder is a cultural theorist and applied social anthropologist who earned his BAH in Psychology and Religious Studies at Queen's University, a Master's in Religion and Culture at Wilfrid Laurier University, and a Master's of Philosophy (MPhil) in Religious Studies from Lancaster University (UK). His research has been broadly on the anthropology of religion, with a focus on the use of qualitative research methods to explore indigenous social networks, the social reality of groups existing on the margins of society, myth and ritual, new religious movements, and the intersection between politics and religion. Matthew is currently a Defence Scientist in the Adversarial Intent Section, Defence R&D Canada (Toronto), and undertaking theoretical and applied research in the cultural context of conflict, cultural support to operations, irregular warfare, radicalization and extremism, and red teaming.

## Endnotes

1. B.W. Gladman, "The 'Best Practices' of Red Teaming," *DRDC CORA TM 2007-29*, Centre for Operational Research and Analysis (2007); and, G. Fontenot, "Seeing Red: Creating a Red-Team Capability for Blue Force," *Military Review* (September-October 2005): 4-8. Gladman uses "opposing force red teaming" to identify the use of role-played adversaries in training environments.
2. Jack Davis, "Improving CIA Analytic Performance: Strategic Warning," *The Sherman Kent Center for Intelligence Analysis*, Vol. 1, No. 1, (September 2002).
3. Ibid.
4. "What We Do," Sandia National Laboratories, www.sandia.gov/iorta/whatwedo.html (accessed 23 October 2008).
5. Glenn Derene, "Inside NSA Red Team Secret Ops with Government's Top Hackers," *Popular Mechanics.com,* 30 June 2008, www.popularmechanics.com/technology/military_law/4270420.html (accessed 23 October 2008).
6. "Red Teams: Toward Radical Innovation, Executive Technology Report," *IBM.com*, July 2005,

www.ibm.com/bcs (accessed 28 September 2008).
7. Ibid.
8. Statement of Gregory D. Kutz, Managing Director, Forensic Audits and Special Investigations, *Investigative Operations: Use of Covert Testing to Identify Security Vulnerabilities and Fraud, Waste, and Abuse*, United States Government Accountability Office, 14 November 2007, GAO-08-286T.
9. Ibid.
10. John F. Sandoz, *Red Teaming: Shaping the Transformation Process*, (Annotated Briefing), Institute for Defense Analyses (IDA Document D-2590, Log H 01-000776), June 2001.
11. Marcus Spade, "Army Approves Plan to Create School for Red Teaming," *TRADOC News Service*, 13 July 2005,www.tradoc.army.mil/pao/tnsarchives/july05/070205.htm (accessed 22 July 2008).
12. Susan Craig is a Red Team Leader at the Joint Intelligence Operations Center of U.S. Pacific Command.
13. Susan Craig, "Reflections from a Red Team Leader," *Military Review* (March-April 2007): 57-60.
14. Ibid.
15. Defense Science Board Task Force, *The Role and Status of DoD Red Teaming Activities*, Office of the Under Secretary of Defence for Acquisition, Technology, and Logistics (September 2003), Washingston, DC, 20301-3140.
16. Fontenot; and Timothy G. Malone and Regan E. Schaupp, "The 'Red Team': Forging a Well-Conceived Contingency Plan," *Aerospace Power Journal*, Summer 2002,http://findarticles.com/p/articles/mi_m0ICK/is_2_16/ai_90529724 (accessed 2 October 2008).
17. Joint Task Force Games (JTFG) is the purpose-built operational headquarters responsible for the command of the CF contribution to the 2010 Winter Olympics. The major part of the JTFG effort will be directed towards security operations in support of the Royal Canadian Mounted Police (RCMP), which is the lead agency for security for the games. In May 2008, the JTFG stood-up the Games Red Team (GRT) to provide independent peer review (i.e. red teaming) of JTFG plans and preparations. The GRT supports JTFG training through a number of red teaming activities, the purpose of which is to maintain the mental agility and competency of JTFG staff.
18. For a more detailed discussion of the importance of red teaming, see: B.W. Gladman, "The 'Best Practices' of Red Teaming," *DRDC CORA TM 2007-29*, Centre for Operational Research and Analysis (2007).
19. Defense Science Board Task Force.
20. Sandoz.
21. Mark Mateski, "Toward a Red Teaming Taxonomy, 2.0 (2004)," *RedTeamJournal.com,* 4 September 2004, http://redteamjournal/com/2008/09/toward-a-red-teaming-taxonomy-20/(accessed 2 October 2008).
22. Ibid.
23. Collaborative learning is an umbrella term for a range of approaches that emphasizes collective development, both for the students and the teachers. Although activities and techniques may vary, collaborative learning is an active, constructive and inherently social process that involves the immersion of the student in rich contexts and challenging tasks in a cooperative environment. See B.L. Smith and J.T. MacGregor, "What is Collaborative Learning," in *Collaborative Learning: A Sourcebook for Higher Education*, ed. A. Goodsell, National Centre on Postsecondary Teaching, Learning and Assessment, Pennsylvania State University, Pennsylvania, (1992).
24. This is particularly important, given the emphasis currently placed by the CF on domestic and humanitarian response capabilities and JIMP / Whole of Government approaches to operations. See: Chris Thatcher, "Future Force: Incorporating More than the Military," *Vanguard*, 2006, www.vanguardcanada.com/FutureForceThatcher (accessed 23 October 2008).
25. Mike Maughan, Adrian Thornhill and Caroline Maughan, "Using the Red-Blue Exercise to Facilitate Learning Transfer: Theory and Practice," *Journal of European Industrial Training*, 20 (8), (1996): 18-21.

# CANADA'S ARCTIC SOVEREIGNTY UNDER SIEGE: THE PRINCE PATRICK INCIDENT OF 2040—AN ALTERNATIVE SECURITY FUTURE

**Major J. Sheahan, CD, Nancy Teeple and Peter Gizewski**

Development of effective defence capabilities requires an assessment of potential security threats within the context of a number of alternative futures. In the examination of potential future scenarios it can be valuable to assess the interconnectedness of global trends across a broad range of disciplines. These may include security, economics, demographics, technology, and natural resources, as examined from a national interest perspective in a regional and global context.

This article is written as a historical account from the perspective of a strategic analyst living in 2040. The analyst identifies those developments that have occurred in the past decades that describe the changes relevant to a particular security challenge in Canada's North. Though aspects of the changes are identified, and indeed the challenge itself may appear less than probable in the context of 2009, the reader is asked to suspend disbelief based upon today's historical reality in order to begin to consider "what if" in the context of 2040.

Combat Camera IS2008-3134

## The World in 2040: Significant Geopolitical Shifts

Over the first four decades of this century, Brazil, Russia, India and China (the BRICs) have, as predicted, seen explosive and sustained growth. Economically, politically, and

militarily, they have achieved levels of international significance (read power) that were once reserved only for the U.S. and for a short time the former U.S.S.R. Shifting military alliances in regions like Africa, South and Central America have been alternately beneficial to and problematic for Canadian involvement in the flash wars and small wars of Sudan, Colombia, Zimbabwe, Congo, and Antarctica. In spite of Canada's contribution of very few troops (or none) to these actions, the Canadian record and willingness to collaborate continues to allow Canada a seat at the table whenever discussions proceed for interim and final status of a given conflict.

Although seemingly far from "significant" in the context of Canada's North, the nations of China, the European Union (EU) and even South Korea (in addition to the circumpolar nations) became involved in Canada's North.

## Peak Oil

For several decades since the mid 1960s some forecasted that a crisis condition known as "peak oil" would arrive (a time at which global demand for oil would exceed supply permanently), followed by a decline in world productivity and an accompanying spike in world oil prices. While these predictions were wrong throughout the 20th century, and remained premature in the early decades of the 21st century, the forecasts created expectations in the years immediately prior to 2040. Evidence of a genuine peak oil situation remained in doubt, although prices became volatile.

## Alternative Energy

Despite the huge increases in terms of funding greater research and development (R&D) for alternative energy solutions, no revolutionary results are anticipated before at least 2060.

One R&D initiative that has borne fruit is nanotechnology. Various discoveries in the field identified emissions-scrubbing catalysts that allowed the burning of coal in a way that is vastly cleaner than ever before. Other R&D led to improved solar and wind harvesting efficiencies. These, in turn, led to smaller energy transportation requirements owing to the localization of energy production.

## Climate Change

Climate change impacts, although never linked conclusively to man's impact on the environment, have become more and more extreme over the years. A number of droughts and water shortages and weather pattern shifts are probably related to the global trend. Permafrost thaws have also become more and more problematic. Pipelines, roads, airfields, and entire town sites experienced costly-to-remedy impacts as the ground moved and heaved in much the same ways that southern Canadians had long known. Solutions in all cases were capital-intensive; and slow solutions have led to federal vs. territorial vs. municipal funding tensions.

## Global and Regional Military Shifts

**North Atlantic Treaty Organization**. NATO in 2040 remains relevant, if underemployed. Although there was never any public agreement on the subject, most of NATO's members independently concluded that the costs of Afghanistan were far too high (and too unpredictable) for the stomachs of western democracies. Tensions with Russia rose and fell in step with various crises over the decades, while Russia's shooting wars were limited to only a few of those ex-republics that it sought to regain. While NATO has remained largely unchanged (and unengaged, in a post Afghanistan, commitment averse, global security order) other newer multilateral security organizations have sprung into existence.

**Circumpolar Arctic Treaty Organization**. Over the years, the tensions which have been consistent between NATO and Russia have morphed into tensions amongst Russia

and some other non-polar nations. This is a curious development given that in the early days (circa 2015) Russia had been invited to become a founding member of the Circumpolar Arctic Treaty Organization (CATO). When Russia bowed out (some thought that that had been intended to scuttle the talks that led to the creation of CATO), there was some surprise that Canada, the U.S., Denmark and Norway had proceeded to create CATO. The goals of CATO included international collaboration on most things Arctic, with strong themes of a minimization of the militarization tendencies of some polar and non-polar nations in the North, environmental protection, and the coordination of national search and rescue (SAR) resources.

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**North American Maritime and Aerospace Defense Command**. Back in 2006 when the ninth North American Aerospace Defense Command (NORAD) renewal agreement was signed a new set of responsibilities was incorporated alongside the decades-old air/aerospace defence set. When additional responsibilities (the monitoring and warning for threats from the maritime approaches to North America) were added to the NORAD agreement, the deliveries of new maritime capabilities were many years in development. After a decade when substantial capabilities began to emerge, the organization's name was modified from NORAD to North American *Maritime* and Aerospace Defense Command (NORMAD). While one of the principle goals of the maritime capability injection has been to counter threats to Canadian and U.S. security approaching the northern maritime continental boundary, a mix of challenges from climate to technology to flagging political resolve has delayed progress in this area. The lack of recognition by the Canadian and American public of new threats in the northern domain remains disconcerting even to this day in 2040. This illogical posture (and Canada's resistance to appropriate defence and Coast Guard funding for the North) is probably the biggest reason that Canada has since invested so heavily in other programs to address security issues for the North. That said, gaps remain, particularly illicit trafficking into and through the North. Where there was once a trickle of illicit traffic in the 2020s (including weapons to U.S. militias, and drugs and human traffic to Canada and the U.S.), the security improvements around the rest of the continental perimeter have deflected organized crime routes northwards. The "soft underbelly of an otherwise secure North American perimeter" is the way that some pundits have repeatedly described the North in recent years.

**North American Defense Organization**. Canada joined the North American Defense Organization (NADO) after much lobbying by the U.S. and Mexico. The initial intent of agreement was to provide cost and resource savings to all parties for their respective border security agencies. This was touted as not unlike the EU approach to security for travelers—without the EU style of political engagement. Over a period of time, however, the activities of NADO, in conjunction with the constraints of the North American Free Trade Agreement (NAFTA), and the cumulative impacts of various American policies and persistent action by political staffs and leaders of the day, cajoled Canada and Mexico into adopting (or closer to adopting than they might have otherwise done) an American isolationist approach to trade and global engagement. Given the trends towards an era of global persistent conflict much in evidence circa 2010 (both in doctrine and in fact), this shift towards an American isolationist posture was a surprise to futurists and to policy analysts alike. Also surprising was the extent

to which the American apparatus was successful at convincing successive Canadian and Mexican administrations, given, in both cases, their high reliance upon foreign trade.

## Canadian Defence Force Developments

In the wake of Canadian mission adjustments in Afghanistan in 2011, and the decade-long economic slump following the 2008-2010 recession, the rebuilding of the Canadian Defence Force (CDF) was slow. The new name CDF is the product of one government that had been unable to accomplish much (other than defence resource reductions) during its term. This neglect of Canadian security requirements has had a direct and generally detrimental impact on Canada's security posture in the North. The long overdue icebreaker for the Coast Guard and the frequently announced ice capability for the Navy have both been delivered—but only after years of delay. In regards to Army mobility in the North, the methods of movement have not changed much in decades (or centuries if you excluded changes to air and maritime assistance). The focus is mainly on surveillance and access, which is, for the most part, provided through satellite, air and naval platforms.

## Canada's Deployments

The major muscle movements resulting from Canadian military and foreign policy since Korea were those in Eastern and Western Europe, Afghanistan, Africa and South America. Later, after decades of very limited expeditionary activity, Canada decided to lead a small stabilization effort in two new and emerging African nations in 2036, Zefrapa and Zefranda.[1] That mission, created in response to high seas piracy threats, grew and expanded into a substantial coalition effort that seemed to have little prospect of success in the near or mid terms. Canadian (and indeed coalition) stabilization efforts escalated rapidly into frequent and sometimes costly combat operations, which drew massive criticism at home and abroad. As the mission expanded within Zefrapa, Canadian troop contributions (especially soldiers and aviation) escalated. After five years in theatre, Canada has begun to rely more and more heavily upon private military corporations. Recent government policy seemed to be seeking a risk-averse way ahead; one that is much less troop intensive. In the absence of another nation stepping up to take lead nation responsibility for the mission, the future of Zefrapa and Zefranda remains unclear.


Combat Camera IS2009-2001

The rising significance of secure access to the sea lanes for global transportation was predictable. Acts of piracy spiked early in the century. Given the costs and difficulty of

patrolling the world's oceans, many nations have adopted a two-thrust strategy to address piracy. The naval blockade of failed states (which harboured pirate bases) is one thrust, and one that is much less expensive than patrolling the sea lanes themselves. The other thrust (which surprisingly to some has turned out to be the more effective long-term strategy to deal with piracy on the high seas) entails a number of Army deployments into chaotic failed and failing states. In this way, foreign teams with comprehensive participation (involving military, other government departments [OGDs], and non-governmental organizations [NGOs]) have sought to rebuild the institutions and machinery of a governed state. Clearly, some states have been more receptive to these measures than others. Still, a seriously high price is paid (in terms of Canadian blood and treasury) to plant some fledgling aspects of democracy, the rule of law, and some marginally functional democratic institutions. Paradoxically, Canada's greatest successes in these types of missions have occurred when she deployed capable inter-agency teams from multiple governmental departments. Meanwhile, she has suffered the greatest losses when the military contingent was only *just* ready for the expected mission.

Perhaps the most surprising allies for the past few decades are those from India and Brazil. Their arrival to the field of expeditionary (and mostly altruistic) operations in the 2020s appears to be a sign of the times. It seems that both nations have begun to manage their explosive growth (not to mention regional military tensions) faster than many had anticipated.

## Circumpolar Developments

Meanwhile, in the northern circumpolar region things have progressed apace. International collaborative scientific expeditions worked well to a point. Exploration of the Lomonosov Ridge became politicized even before a general level of recognition for the stakes had arisen. Regardless, the five circumpolar nations succeeded in meeting their deadlines for submissions concerning extensions of polar continental shelf claims. From that time forward (when the rules-based process was expected to determine the extent of competing continental shelf claims), the wheels have all but fallen off. Institutional inertia prevented even the first feeble rulings from the United Nations (UN) for almost a full decade. Generally unsatisfactory to all concerned parties (and unsatisfactory to China and South Korea too), the rulings have been under appeal almost continuously for 20 years now. This has not been productive for the level of goodwill in the region. Political and even military tensions have been rising incrementally for two decades with uncertainties over shipping and the exploitation of natural resources, especially oil and gas. Even such relatively minor issues as environmental protection regulations (and their enforcement) and SAR responsibilities have become international irritants. But in the past decade, a coalition (Canada, the U.S., Denmark, and Norway) has worked tirelessly with Russia to arrive at interim multilateral agreements that (while not completely ignoring the progress at the UN) temporarily remove the urgency for a UN decision. The benefit for the energy-starved markets in the rest of the world is that the potential oil and gas-rich fields in the North are finally going to receive the investment that many feel they deserve.

Hans Island and the Lincoln Sea sovereignty questions were the easiest of all geographical conflicts to resolve, and insignificant in the larger picture. However, the Canadian debate on the Beaufort Sea boundary dispute experienced controversial levels similar to those of the Free Trade Agreement machinations of the 1980s. In the end, the Prime Minister became involved and Canada traded away the sovereignty of about 60% of the disputed Beaufort Sea region. In exchange, Canada received U.S. support of the Canadian position regarding the "Canadian internal waters" status of the Northwest Passage (NWP) and indeed all routes through Canada's Arctic Archipelago. However, to the immense disappointment of Canadians ever since, the UN rulings on the NWP have been under constant challenge, first by Russia, then by China, and now it is entirely likely that at least two of the other superpowers will also submit challenges. Meanwhile, the American portion (60%) of the disputed Beaufort Sea claim is tremendously productive. Oil and gas exploitation on the American side has experienced more than quadruple the production rates of the Canadian interests.

As the summer ice presence in the NWP has changed, more and more adventurers have made the transit every year. Some years these efforts ended in tragedy as some of the adventurers were criminally ill-prepared for adverse conditions. Commercial traffic, meanwhile, has remained uncommitted in the NWP as the North Sea Route has long been more ice free and a more reliable trans-polar traffic option. Until the annual flushing effect of icebergs and ice packs in the NWP changes, it appears that commercial traffic will remain a low probability.

**NORDREG**. The northern maritime traffic reporting system was strengthened in 2012. The voluntary reporting system, one which for several years received well in excess of 98% compliance (since adherents received free meteorological products and SAR coverage), was modified to require compulsory reporting 96 hours in advance of a vessel's entrance into Canadian waterways. The only problematic nations, in light of the new requirements, are China, Russia, and occasionally South Korea. Diplomatic channels have been churning for decades (mostly without much effect) to improve compliance in the North.

When the Arctic Waters Pollution Prevention Act (AWPPA) was expanded in 2014 from 100 to 200 nautical miles, it was generally well-received. The change has not been challenged, but perhaps as importantly, Russia and China do not recognize it.

Combat Camera IS2009-2026

## Coast Guard and Navy

By 2030, the Canadian Coast Guard (CCG) brought into service a heavy icebreaker—a long overdue replacement for the 1960s vintage Louis St. Laurent. Recognized as a world class ice-capable vessel it is able to operate year round in first year ice, and for three seasons each year, in the more robust multi-year ice (up to 2.5 meters thick) as well. The vessel proves its value time and time again when used to assist vessels in distress throughout the North. The vessel CCGS John G. Diefenbaker and her crew have also been employed extensively in support of various scientific initiatives.

Meanwhile, the Canadian Navy also entered the North with a new fleet of six Arctic Offshore Patrol Ships. In the early days, there was controversy about the role of the Navy in the North, some having concluded that it would have been more practical to leave such

operations up to the Coast Guard. Recommendations for a collaborative relationship between the CCG and the Navy in providing sovereignty and security presence in the Arctic found a great deal of support. In the end, the senior service has adopted the new mission sets with enthusiasm and to great effect.

## Communications Challenges in the Arctic

Despite the world wide revolution in communications (a Moore's law effect that had not shown any signs of abating), the relatively low density of development in the North was and remains accompanied by communications challenges. Many regions of the Canadian Arctic have little or no Banana coverage. The Banana, a Canadian invention, is the "great-grandson" of another Canadian invention, the Blackberry. Voice activated, global positioning system (GPS), video and holography enabled, secure Bananas have become so thoroughly integrated into daily life in the South, that visitors to the North have experienced real trouble when their Bananas have become just another piece of jewellery. Even the quaint throwbacks (the ubiquitous satellite-phone and low-tech satellite-mail) continue to have spotty coverage mostly limited to urban and industrial centers in the North. Satellite capabilities (which had seen huge improvements in the past decade) are still the promises that have not quite delivered—at least not to everyone in every community, and in particular, not to many of the isolated northern communities.

## Forward Operating Locations

As Canada's four Forward Operating Locations (FOLs), each capable of supporting fighter operations, reached the end of their anticipated economic life expectancy, and after mid-life refit plans were cancelled (twice), it became necessary to dedicate more and more effort to operate and maintain the facilities. This resulted in the establishment of small military garrisons at Inuvik, Yellowknife, Rankin Inlet, and Iqaluit.[2] In recent years, the government pointed to these garrisons as evidence of an increased security footprint, while in reality the small detachments have much more to do with infrastructure maintenance (and contract management) than anything else. A side benefit of the increased military presence in the North is a marginally enhanced capability to deal with a range of minor emergencies, as well as limited support for ground search efforts.

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## Arctic Training Centre

The federal Arctic Training Centre (ATC) initiative announced by the Prime Minister in 2007 was delivered over a period of more than a decade. Establishment of the ATC capability had leveraged the pre-existing footprint of the Natural Resources Canada's Polar Continental Shelf Program at Resolute Bay. A success story in multi-departmental collaboration, it is utilized by Canada Command as well as all three Environments primarily for individual training requirements. The ATC's accommodations, messing, vehicle fleets, communications suites and sustainment facilities are frequently maximized (sometimes beyond their 100-bed capacity), which has led to plans, as yet unfunded, for expansion. Plans to augment the fly-in staff at the ATC with a permanent cadre (trainers were rotated in annually from the CDF Land Advance Warfare Centre at Trenton and from the CDF School of Search and Rescue at Comox) are also contingent on future approvals. While the permanent Department of National Defence (DND) establishment in Nunavut is an effective base for multiple training purposes, the absence of permanent military staff has not seemed to limit that capability in any insurmountable ways. At the same time, a number of individual and collective training initiatives have been making use of other existing DND facilities, including the FOLs and the North Warning System sites.

## Northern Ranger Expansion

The first phase of expansion increased the strength of the Northern Rangers (NR) to 4,800 persons by 2015.[3] The second phase of expansion (not foreseen at that time) was planned for implementation circa 2025-2030. The expansion was initially deferred partly due to economic pressures (the Government needed more flexibility to deal with other economic pressures of the day) and partly due to a lack of political will to further develop the North. Fortunately, the program was later resurrected for implementation in 2039-2044. Expansion of the NR capability is welcome throughout the North, particularly in the several cities and communities which saw almost 100% growth in just over the decade since 2010. In some communities, that record growth (almost entirely due to corporate moves related directly or indirectly to resource industries; about one-half by Canadians, and half by temporary visa workers) doubled again beginning in the 2020s.

Combat Camera IS2009-2021

Although the establishment of a Ranger Training Centre had been planned to occur in each of the territorial capitals for a number of years, funds remain to be allocated. As a result, the training requirement remains largely dependant upon mobile training teams.

## New Reserve Subunits

Following the successful establishment of a reserve infantry company in Yellowknife circa 2015, the establishment of two more reserve companies is planned. Both are expected to have a service support role with a focus on northern operations, likely targeting SAR missions and/or other emergency tasks. Though their locations, likely in Nunavut and the Yukon, have not yet been finalized, it is probable that the territorial capitals of Iqaluit and Whitehorse will be selected.

## Arctic Reserve Company Groups

The idea of establishing Arctic Reserve Company Groups (ARCGs) was born almost 40 years ago. Initially, it was achieved by refocusing the training of one Reserve company in each of the Land Force Areas (southern Canada) to include progressively more comprehensive Arctic training and deployments. In recent years, a new plan was placed under development. That plan is to see an expansion of the Army's Northern capability to include Arctic training and deployments for an additional company per Reserve *and* Regular brigade. In the distant future, there will be an additional plan to concentrate training of one Reserve battalion per Area and one battalion per Regular brigade for the North too. The largest single obstacle to readiness to date is a simple real world challenge. Funding for training with a northern focus is not the problem. Striking the right balance between expeditionary and domestic (primarily Arctic) training is the perennial challenge.

## Nanisivik Deep Water Port

Initially established in 2015 as a limited service Refuelling Facility for federal vessels (i.e. the Navy and Coast Guard), this facility has demonstrated world class standards of safety and environmental stewardship. With a great deal of federal support, Nanisivik expanded in the following years to include an upgraded airhead and additional fuel storage and distribution capabilities. Over a multiple decade period, the plans called for limited multinational commercial refuelling capabilities—both for air and maritime requirements. Caching of Land and Air sustainment supplies for national (and/or international) emergencies were also part of the plans. However, the occurrence of a fire in 2035 (one which could have been catastrophic) led to a modification of plans. A plan to decentralize emergency sustainment caches is now under development.

## Economic Developments Leading up to a Northern Crisis in 2040

More than 30 years ago, when a U.S. Geological Survey report identified phenomenal levels of *potential reserves of oil and gas* in the northern circumpolar regions, it was widely dismissed.[4] With the impact of global warming, escalating global demand for oil and gas, and the resultant development of technology for northern extraction operations, all this changed. Internationally, the rates of production of oil and gas from across the Arctic approached historic peak production levels equal to the Persian Gulf region,[5] a region which for a decade saw declining productivity. The Canadian North, owing to its relatively inaccessible geography was the last region of the North to see development. Since 2025, however, demographic and economic growth has been explosive throughout the Arctic Archipelago due to the increase in production. Economic spinoffs include a broad range of tourism from adventure holidays, eco-tourism, cruise ships, to a new level of interest in hunting, fishing and even photography camps.

In recent years, numerous groups identified and criticized gaps in Canada's Northern security capabilities. Some analysts noted that the growth in mining towns and the explosive growth in wealth of Canada's North raised a security challenge far more in need of military

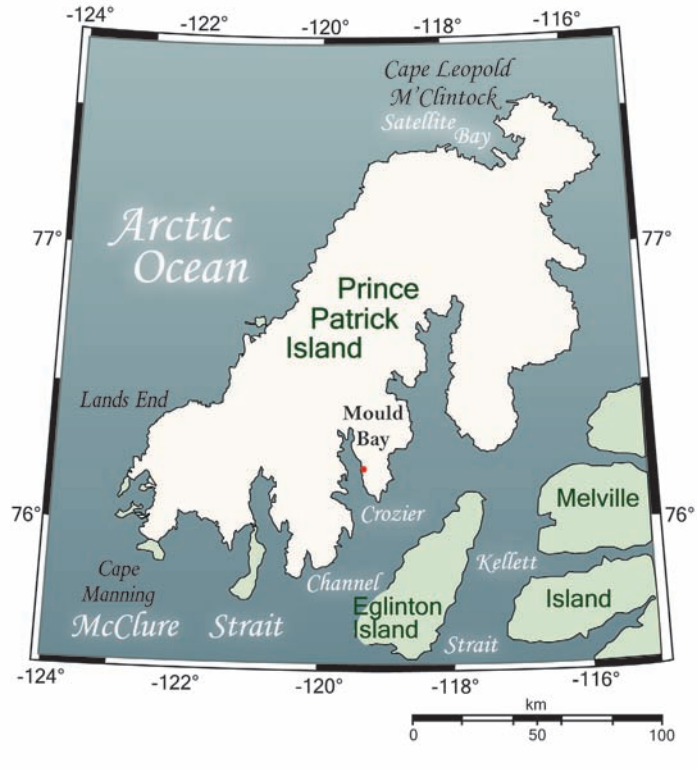
capabilities than the increased (but still minimal) presence of Royal Canadian Mounted Police (RCMP) detachments.

## Offshore Developments

During the decade 2020-2030, political and economic conditions in East Asia began to shift. Asian republics, in general, emerged in an increasingly politically unstable region where international rogue elements flourished. In particular, the Republic of Xenostate became a hub for criminal organizations, which initially converged in this region attracted by its vast reserves of natural resources, including diamonds, gold, silver, oil, gas and coal. Legitimate Xeno corporations, which had occasionally dabbled in black market activities—such as firearms, narcotics, and the sex trade—began to venture further and further into the criminal world. Ultimately, this progression led to the emergence of increasingly powerful eastern syndicates. For instance, by 2030 a Xeno firm known as ZHAPROV had achieved a degree of size and power akin to that of other East Asian giants. As the syndicate gained more influence in both legitimate and black markets worldwide, it became ever more synonymous with the corrupt Xeno government. Nevertheless, ZHAPROV itself maintained a legitimate image on the global market.

## ZHAPROV Expands into the Canadian Archipelago

In 2036, following a number of successful offshore oil operations, ZHAPROV bid for and won exploration rights for the first time in Canada. Successful wells were proven within a year, and by 2038 operations on the northern shore of Prince Patrick Island, NWT, were launched. The ZHAPROV lease covered a relatively small region on the shore of this desolate island in the western region of the Canadian Arctic Archipelago.[6] The ZHAPROV operation included a



small logistics settlement near the mining facility, which included an austere harbour, a small airstrip, equipment warehouses, accommodations and oil storage facilities. The facility was staffed primarily by ethnic Xenos.

As the oil potential for the entire island appeared to be lucrative, ZHAPROV had applied early for exploration rights for the remainder of the island. When the Canadian response to the ZHAPROV request was routine (i.e. rights for some of the other parts of the island were to be auctioned in different years in the 2041-2045 time frame), ZHAPROV protested. When it became evident that neither protests nor inducements (a.k.a. bribery) would accelerate the ZHAPROV request, the firm decided to pursue other options.

## Sequence of Events

**2039**: Throughout the shipping months, a number of sources[7] reported that the level of logistics activity at the ZHAPROV mine on Prince Patrick Island had accelerated abruptly.

**Early September 2040**: Two ships—one icebreaker and one ice-strengthened ship—departed from a North Asian port. Ninety-six hours prior to entering Canadian waters, they reported their presence in accordance with NORDREG, listing a routine cargo of mining equipment and supplies bound for the ZHAPROV mining settlement on Prince Patrick Island. Upon entering Canadian waters, the vessels' communications mysteriously went silent.

**Saturday 15 September 2040**: Analysis of satellite imagery indicated that upon arrival at Prince Patrick Island, the ships harboured on the southern shore in Mould Bay, a site not requested in the NORDREG submission and not authorized by the environmental regulations of Canada.

**Monday 17 September 2040**: Following the discovery of this development, the CCG attempted to clarify the intent of the deviation from plans by contacting the vessels by radio. Despite redoubled efforts, all attempts to communicate failed.

**Wednesday 19 September 2040**: The CCG notified relevant OGDs including Border Services, Indian and Northern Affairs Canada (INAC), DND, the Department of Foreign Affairs and International Trade (DFAIT), and the Solicitor General. Both the Government Operations Centre and the Integrated Threat Assessment Centre began to monitor the situation.

**Friday 21 September 2040**: Independent surveillance reports utilizing RADARSAT IV, and from NORMAD and other American resources, confirmed that the offloading of supplies was progressing at a rapid pace. Analysis indicated that preparations for drilling operations proceeded at a site not authorized for ZHAPROV, or any other firm.

**Saturday 22 September 2040**: Further analysis of other surveillance data indicated the presence of one or two foreign submarines in vicinity of Prince Patrick Island. They appeared to be patrolling on a continuing basis with a wide radius around the island.

**Sunday 23 September 2040**: Before a request was made by Canada, the U.S. confirmed the placement of United States Navy (USN) submarines (numbers unconfirmed) in the vicinity of Prince Patrick Island in the interest of monitoring ZHAPROV's activities near the Beaufort Sea. They expressed concern for possible aggressive Xeno action in the interest of capitalizing on the disputed territory with much oil and gas potential. The Americans also noted that the mysterious ZHAPROV ships communications problems with Canada were not impacting on ZHAPROV's ability to conduct short and long range communications with other, non Canadian stations.

**Monday 24 September 2040**: Coincidentally, a Canadian Ranger Patrol, conducting one of their routine annual training events, launched a multi-day patrol to Prince Patrick Island from nearby Eglinton Island bound for Mould Bay.

**Tuesday 25 September 2040**: Further analysis of remote surveillance data estimated that the staff presence on Prince Patrick Island clearly surged from the roughly 100 staff previously present at the ZHAPROV facility in the North to almost 1,000; most of which were

located at the new facility in the South. It also appeared that some sort of commercial and/or military activity had been present in the south, long before the arrival of the vessels.

**Wednesday 26 September 2040**: Further analysis indicated that the ZHAPROV airstrip on Prince Patrick Island was in heavy use by helicopters ferrying cargo from the vessels to Mould Bay. Whenever the airstrip was not in use, it was routinely closed by local staff who parked heavy trucks at key points along the airfield. The airstrip at the northern facility was being closed in exactly the same way.

**17:00 hours—Thursday 27 September 2040**: More than 10 km offshore at a point south of Mould Bay, the Ranger Patrol was met by a patrol on snow machines that appeared to be from the ZHAPROV landing. Communication was impossible due to language barriers, but the message from the ZHAPROV patrol was clear: "Go away—now!" There was no obvious threat of violence, but many automatic weapons were very clearly present. Uniforms were not visible. In their report back to headquarters, filed just a few hours later, the patrol also described hearing unusual sounds, very distant and very loud, similar to, but not quite like thunder.

**15:30 hours—Friday 28 September 2040**: The Attorney General asked the Chief of the Defence Staff (CDS) to be prepared to provide Aid to the Civil Power in the event that the RCMP is unable to deal with the situation. An hour later, the Chief of Staff to the Prime Minister contacted the Ministers of DFAIT, DND, Border Services, Fisheries and Oceans, Public Safety and the Attorney General. He explained to them that the Prime Minister wants a briefing at her residence tomorrow (Saturday) at 11:00 hours to identify options "to deal with an unauthorized foreign presence in Canada's North." Later that night, the Office of the Prime Minister (PMO) advised an ad hoc selection of cabinet ministers to be prepared to receive briefings on matters of urgent national security, perhaps as early as Sunday.

## Epilogue

Before the reader voices disbelief for this portrayal of a security threat, it may be useful to recall a number of relatively recent Arctic incidents. For instance, in 1969 an American supertanker named the *Manhattan* sailed through the NWP without requesting authority from Canada.[8] In 1985, the U.S. Coast Guard vessel the *Polar Sea* sailed through the passage, again without requesting Canadian permission.[9] In 1998, a Russian Ilyushin-76 aircraft landed at Churchill under irregular circumstances.[10] In 2008, Russia resumed the Cold War practice of probing the Canadian air defences with trans-polar flights; reinstituted with a surprisingly high level of frequency.[11] In 2009, President Bush released a revised U.S. Arctic Policy, which reflected the American position that the NWP represents an international strait and called for an increased U.S. presence in the North to reinforce its economic and security interests there.[12]

Canada's current posture regarding the security of its Northern frontier could be described as "surveillance-centric and troop-minimalist," or "high-tech, low-muscle." With the expected growth in resource extraction operations in the North, along with a commensurate explosion of populations, communities and wealth, the announcement by the Prime Minister of a new national focus on the security and sovereignty of the North[13] in 2007 did not come as a surprise.

The challenge for DND in the coming years will be to balance this requirement with existing defence commitments. In the case of the Land Force, the challenge is made especially critical by the realities of our northern geography and climate, and by the continuing requirement to train and deploy troops in expeditionary capacities.

## Endnotes

1. Artificial nations representing potential areas of conflict for the purpose of this discussion.
2. Canadian Department of National Defence, "Radar Coverage and Air Defence," *Canadian Air Force*, http://www.airforce.forces.gc.ca/site/athomedocs/athome_1_3_e.asp

(accessed 18 March 2007).
3. Government of Canada, “Backgrounder — Expanding Canadian Forces Operations in the Arctic,” *Office of the Prime Minister of Canada*, 10 August 2007, http://pm.gc.ca/eng/media.asp?id=1785. Prime Minister Stephen Harper announced the expansion of the Canadian Rangers from 4,100 to 5,000 over a 20 year period.
4. It was believed that the estimates were theoretical and wildly high because of the difficulties of discovery, extraction and transportation in the North were expected to make operations commercially unviable for many decades, if not centuries.
5. Benoit Beauchamp and Rob Huebert, “Canadian Sovereignty Linked to Energy Development in the North,” *InfoNorth* — Arctic, Vol. 61., No. 3 (September 2008), http://pubs.aina.ucalgary.ca/arctic/Arctic61-3-341.pdf (accessed 27 August 2008); and, U.S. Government Energy Information Administration, “World Proved Reserves of Oil and Natural Gas,” 3 March 2009, http://www.eia.doe.gov/emeu/international/reserves.html (accessed 27 August 2008). Reports on oil and gas estimates for each nation, summarizing each continent’s potential.
6. University of Guelph, “Map of Prince Patrick Island,” http://www.arctic.uoguelph.ca/cpe/environments/maps/detailed/islands/prince_patrick.htm; and, U.S. Geological Survey, “Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle,” Fact Sheet July 2008, http://pubs.usgs.gov/fs/2008/3049/fs2008-3049.pdf and in *Geology.com*, http://geology.com/usgs/arctic-oil-and-gas-report.shtml.
7. Northern Ranger patrol reports, RADARSAT IV imagery, NORAD, and independent U.S. imagery.
8. John Kirton and Don Munton, “The Manhattan Voyages and their Aftermath,” in *Politics of the Northwest Passage*, ed. Franklyn Griffiths (Kingston: McGill-Queen’s University Press, 1987), 70-73; and, Michael Byers, “The Need to Defence Our New Northwest Passage,” The Tyee (30 January 2006), http://thetyee.ca/Views/2006/01/30/DefendNorthwestPassage/.
9. Canada Gazette, Pt. II, Vol. 119, No. 20, p. 3996 (10 September 1985); and, Andrea Charron, “The Northwest Passage in Context,” *Canadian Military Journal* (Winter 2005-2006), 43, 47. Canada claimed that the passage of the Polar Sea was made under its permission, which the U.S. denied.
10. Ed Struzik, “Who’s Guarding our Back Door?,” *TheStar.com* (18 November 2007), http://www.thestar.com/ArcticInPeril/article/277429.
11. Michel Chossudovsky, “New Cold War: Simultaneously, Russia and America Conduct Major War Games,” *GlobalResearch.ca* (16 October 2007), http://www.globalresearch.ca/index.php?context=va&aid=7098; and, “Canada Seeing Increased Russian Activity in Arctic,” *javno.com* (29 August 2008), http://www.javno.com/en/world/clanak.php?id=176887.
12. ----, “Arctic Sovereignty: No More Northern Lite,” *TheChronicleHerald.ca* (15 January 2008), http://thechronicleherald.ca/Editorial/1100831.html ; and, ----, “Bush Signs New Arctic Policy, Outlining U.S. Intentions in the North,” CBC.ca (12 January 2008), http://www.cbc.ca/canada/north/story/2009/01/12/bush-arctic.html.
13. Randy Boswell and Mike De Souza, “Time to ‘Use it or Lose it,’ Harper Declares,” *Canada.com* (11 August 2007), http://www.canada.com/montrealgazette/news/story.html?id=f1cbc914-e437-4378-b1be-91c47540631c&k=2141; and, ----, “PM Starts Fight for North,” *TheStar.com* (10 August 2007), http://www.thestar.com/News/article/245117.

# DEADLY ENDS: CANADA, NATO AND SUICIDE AS A WEAPON OF WAR IN MODERN AFGHANISTAN

**Andrew Fraser**

This article will examine the wave of suicide attacks that targeted Canadian forces in Afghanistan over an 18-month period between 1 October 2005 and 31 March 2007 and assess their effectiveness as a weapon of war. It is to be noted that the majority of the 26 suicide attacks that targeted Canadian personnel in this time frame did not result in serious injury or death to International Security Assistance Force personnel. The overwhelming majority of those killed, however, were Afghan bystanders and, of those, more than 80% were civilian. This analysis will review the tactics the bombers employed in the Kandahar City area and the rates of attack which will show that in 2007, suicide attacks against Canadian forces were largely abandoned in favour of roadside bombs. It will also contrast the British and American experience in Afghanistan in dealing with suicide bombers, both of whom dealt with proportionately fewer suicide attacks than Canadian forces.

There was virtually no history of suicide bombing in the two decades of warfare that shattered Afghan society leading up to the fall of the Taliban in 2001[1] There were a small handful of exceptions, notably the assassination of Northern Alliance leader Ahmad Shah Masood in 2001, but those attacks were always attributed to foreigners. In 2006, a Taliban commander based in Peshawar, Pakistan gave an interview to a French newspaper in which he declared that suicide bombing was a foreign concept that had been introduced to the Taliban by Arab militants He professed that the Taliban had embraced suicide bombing as a method of articulating “Afghan rage”.[2]

The escalation of suicide attacks began slowly with only one in all of Afghanistan in 2002, followed by two in 2003 and six in 2004. In 2005, the number of suicide attacks in the country grew to 21.[3] In 2006 there was a phenomenal increase when there were at least 115 suicide attacks recorded.[4] The following year the United Nations reported the occurrence of 160 suicide bombings in Afghanistan;[5] but, controversy exists over the identities of the bombers. NATO asserts that they are mainly drug addicts or those looking to pay off family debts.[6] Some research suggests that a substantial number of the attackers suffered from severe physical or mental disabilities.[7] Various researchers in the region who interviewed failed would-be bombers reported that many of them were poor, young men who had been tempted by visions of the heavenly afterlife their recruiters had promised them.[8] Many had trained at Taliban camps in the Pashtun tribal areas in western Pakistan where militant recruiters inculcated them with a concentrated barrage of militant propaganda about the presence of international forces in Afghanistan.[9] Canadian forces have been left to deal with the fallout.

In the morning light of Wednesday, 5 October 2005, a vehicle laden with explosives approached an oncoming Canadian convoy on Highway 4, about one kilometre outside of the city of Kandahar.[10] The driver had taken to the road with the intent of perishing as a martyr. For reasons that will never be known, he did not set off the bomb when he first drove by.[11] After passing the three G Wagon light utility vehicles, the bomber turned his vehicle around and charged towards the end of the convoy.[12] As he pulled up to the last vehicle in the convoy, he secured his reunion with destiny and blew himself to pieces. By happenstance, a local farmer was driving past in a tractor, pulling a wagon. He was seriously hurt and his 10 year-old son was killed. Three soldiers in the last G Wagon suffered what were described as minor injuries.

The attacker was the first of at least 26 suicide bombers who killed themselves in attacks targeting Canadian personnel over the course of the next 18 months in Afghanistan. NATO typically does not release the nationalities of the soldiers involved in specific incidents. Consequently, a key obstacle to compiling such a list is that the country of origin of the soldiers involved can remain a mystery if their government so desires. However, for incidents in which Canadian personnel were the target, relatively detailed information has usually been forthcoming from military sources. Nonetheless, there were several suicide attacks targeting international forces in the general region of Kandahar City where the nationality of the soldiers involved was unclear. Such incidents include a suicide attack on a convoy east of the city that wounded two ISAF soldiers on 18 December 2006 and another, by a bomber on a motorcycle, which killed one or possibly two bystanders in another convoy attack three weeks earlier, in Kandahar City itself.[13] Such incidents have been excluded from the list of attacks on Canadian forces.

AR2005-A01-239a5 Oct. 2005 PRT Site Kandahar, Afghanistan. Sgt Jerry Kean DND

**American Military counterparts join soldiers from the Canadian Provincial Reconstruction Team (PRT) as they search the surrounding area after a suicide bomber, near the PRT convoy, detonated a Vehicle-Borne Improvised Explosive Device (VBIED). The incident took place traveling on Hwy 4 in Qandahar City, Afghanistan. The G-Wagon sustained minor damage.**

Over the course of 26 attacks, 11 Canadians were killed; 10 soldiers and one diplomat, and about 50 soldiers suffered varying degrees of injury. Nearly half of the deaths and injuries among military personnel were the result of the worst single incident, a bicycle-borne suicide attack on a large contingent of soldiers who were dismounted in the village of Kafir Band in the Panjwaii district on 18 September 2006. Four soldiers were killed and 21 injured.[14] Of those who were wounded in that attack, the military indicated that preparations were underway to evacuate 10 of them from Afghanistan for further medical treatment, with potentially more to follow.[15] This would bring the number of soldiers injured seriously enough in suicide bombings to require evacuation from the theatre of operations during the period to at least 17.

Based on the available information, 11 of the 26 attacks accounted for all of the aforementioned deaths and serious injuries among Canadian personnel. There is also a discernable pattern regarding when the attacks were most likely to happen. The overwhelming tendency was for the bombings to take place during daylight hours. In the 20 incidents where the time of the attack was immediately specified, all occurred from 7 a.m. to 7:30 p.m.

AR2009-J040-18. March 21, 2009. Kandahar, Afghanistan. Cpl James Nightingale, JTFK Image Tech, Afghanistan Roto 6

**Soldiers at Kandahar Air Field take part in a Ramp Ceremony to pay respects to their fallen comrades on 22 March 2009**

## Civilian Casualties

The available evidence examined for this paper indicates that the suicide bombers who targeted Canadian ISAF forces killed approximately 49 Afghan civilians, accounting for about 82 percent of those killed in the attacks. At least five of those who perished in the bombings were children under the age of 12. Published reports indicated that civilians were killed in 16 of the 26 attacks. The attacks targeting Canadian forces did not result in any deaths among the Afghan security forces.

The ratio of civilian deaths largely parallels American military claims made in August 2006 stating that of those killed in suicide attacks in Afghanistan since the beginning of the year, 84%, (105 of 124 deaths), were civilians.[16] It also closely matches a Human Rights Watch study which found that for all suicide attacks carried out in Afghanistan in the year 2006, 83% of those killed, (181 of 218 deaths) were civilians.[17]

The deadliest single attack appears to have come about when a suicide attacker detonated his explosives in a market in the Panjwaii district as Canadian personnel were operating in the vicinity.[18] The bomber reportedly moved towards a small Canadian convoy before darting into the market and setting off his explosives, killing 21 civilians and injuring 13.[19] According to the Afghan interior ministry, many children were killed as they were leaving a nearby mosque.[20] It should be noted, that the aforementioned figure of children killed in suicide attacks does not include this incident, as the number of children who perished in the market was never made clear.[21] Even excluding this, the deadliest incident, a full two-thirds of those killed in the attacks on Canadian military personnel during the 18 months in question would still be civilians.

## Tactics

Typically, the attacks involve a lone bomber using a vehicle to target ISAF patrols or convoys. In addition to a certain prestige and obvious tactical logic associated with knocking

out enemy vehicles, patrols and convoys likely represent the most readily available targets. Published accounts indicate that the bombers used vehicles, excluding motorcycles, in 22 of the 26 attacks. The vehicles involved were often Toyota Corollas, commonly used by Afghans who have the financial wherewithal to drive. In two instances, the bombers were on foot. In the other two cases, one attacker used a motorcycle to deliver himself to oblivion and, as stated, the attacker in Kafir Band rode a bicycle.[22] Little is publicly known about the methods of detonation; whether the bombs were set off by the attackers themselves or whether in some cases, a nearby collaborator detonated them by remote control. However, a military Board of Inquiry into the 15 January 2006 attack that killed senior diplomat Glyn Berry concluded that, based on unspecified evidence found at the scene, the driver of the attack vehicle had detonated the bomb himself.[23]

There were a handful of incidents where the tactics employed by the bombers changed, but generally these shifts in strategy were one-off events that pertained only to a single attack. There was only one attack that involved multiple bombers using separate bombs. It began when a vehicle-borne attacker targeted the last vehicle in a long convoy returning to the Kandahar Airfield after vicious fighting in the western region of Kandahar province and the neighbouring province of Helmand.[24] The bombing killed two soldiers and injured eight others. Within an hour, a second bomber blew himself up among the Afghan bystanders who were mingling in the area after the first attack, killing five civilians.[25]

On 30 March 2006, a vehicle laden with explosives cut between a Canadian G Wagon and a Romanian armoured vehicle and exploded, resulting in the death of a child and an ear injury to one of the soldiers in the Canadian vehicle.[26] Accounts of this attack conflict as some reports indicated that two bombers were in the attack vehicle.[27] This is the only attack where the possibility of two bombers using a single bomb was raised. However, other sources were less certain about the presence of a second bomber in the vehicle and a Taliban spokesman mentioned only one bomber.[28] Two days prior to the attack, two insurgents were killed when explosives they were handling went off accidentally while they were visiting a cemetery in the Kandahar City area, near a roadway frequented by NATO

AR2006-H016-0031a 30 Mar 2006 Kandahar Airfield, Afghanistan, Sergeant Carole Morissette
Task Force Afghanistan Roto 1Imagery Technician

**A joint Canadian and Romanian convoy was attacked by a suicide car bomber while delivering supplies to a remote outpost in Gumbad, approximately 70 km north of Kandahar City, Afghanistan. Once the convoy was moved to a secure location, the injured Canadian was evacuated to a hospital at the coalition base at Kandahar Airfield. The soldier suffered only minor injuries.**

patrols.[29] Whether or not they were planning to carry out an attack separately or together will, of course, never be clear.

There appears to have been at least one attack where the suicide bomber may have been acting as part of a broader ambush. On 26 March, 2007, insurgents attacked a Canadian convoy in the perennially dangerous Zhari district, west of Kandahar City.[30] As the vehicles were retreating from the area, a car bomb detonated injuring two soldiers, one of them receiving serious arm injuries.[31] Despite some initial confusion among media sources about whether or not the bombing was a suicide attack, the sources eventually settled on the conclusion that the explosion was, in fact, a suicide bombing. There was also an incident where a suicide bomber attacked a vehicle patrol on 29 August 2006, killing two civilian bystanders outside Kandahar City. A bravery citation issued a year later stated that the suicide bombing was one of three attacks endured by the patrol that day.[32] To what extent, if any, they were coordinated with the suicide bombing is not clear.

## The Aftermaths of Suicide Bombings

With each suicide attack, there is a risk that civilians caught in the aftermath will be shot by coalition forces acting under the erroneous impression that they are secondary attackers. For instance, in March 2007, in the immediate wake of a suicide attack on an American convoy in eastern Nangarhar Province, a Marine Corps Special Forces unit opened fire and killed numerous bystanders, prompting considerable public consternation in the area. In an earlier attack on 3 December 2006, a vehicle-borne suicide bomber set off his device near a British convoy in Kandahar City, injuring three Royal Marines.[33] After the bomber had blown himself up, the Marines opened fire, killing three civilian bystanders.[34] Well known Associated Press reporter Noor Khan, who was driving in the area, reported that he was almost shot in the fusillade.[35]

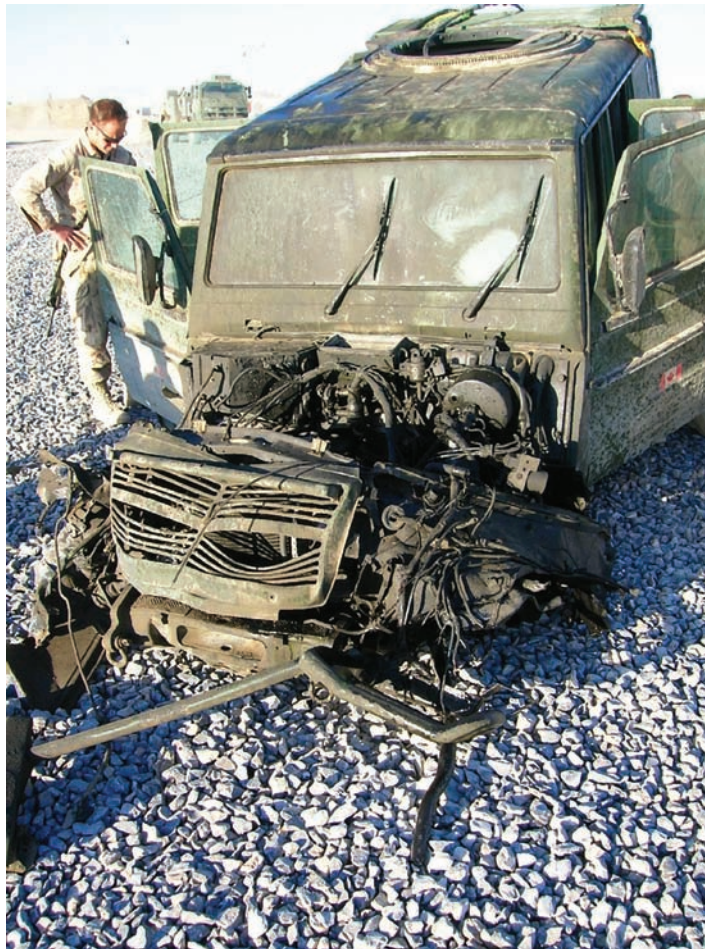
These incidents highlight the dangers that arise in the aftermaths of such attacks. Over the course of 18 months, Canadians soldiers killed at least six Afghans whom they mistook for insurgent attackers; however, there was only one documented incident of a Canadian soldier fatally shooting a civilian in the wake of a suicide attack.[36] It was a particularly tragic sequence of events that began when a suicide bomber in a vehicle blew himself up in Kandahar City, destroying two passing Canadian military vehicles; a soldier and a young Afghan girl were killed.[37] Some time later, after Canadian and Afghan forces had established a perimeter, a soldier fatally shot a local child who was riding as a passenger on a passing motorcycle. The motorbike apparently was driven by a teenaged relative who sped past a group of Afghan police officers who were desperately signalling for them to stop.[38] A soldier fired a shot that ripped through the body of the driver and then tragically killed his passenger. This tragedy had ramifications both locally and in Canada; however, the fact that only one such fatal shooting has occurred in a country with a tradition of driving and road safety that is far more ungoverned and frenetic than in wealthier parts of the world indicates that Canadian forces have shown a high degree of professionalism and restraint in the tense and dangerous aftermaths of suicide bomb attacks.

## Attack Rates

The rate of suicide attacks targeting Canadian personnel intensified in the latter half of 2006 when there were 15 suicide bombings and then began to abate in 2007. One change in tactics can only be seen when contemplating attacks that occurred after the 18-month time period covered in this study. Beginning in April 2007, Canadian forces faced fewer suicide attacks, with only four occurring between April and December, but a much greater occurrence of particularly powerful roadside bombs, something which had occurred only occasionally up to that point in the mission. In just under 3 months, from April 6 to July 4, those attacks killed nearly twice as many soldiers as all the suicide attacks combined in the previous 21 months; however, the decline in suicide attacks targeting Canadian forces did not correspond with the overall pattern of suicide bombings in Afghanistan, where the overall number of attacks increased between 2006 and 2007.[39]

The arrival of the Canadian force in Kandahar occurred at a time when Afghanistan was on the cusp of an extraordinary increase in the use of suicide bombing as a tactic of war. The use of suicide bombers had minimal precedent in Afghanistan prior to the 2001 fall of the Taliban. There was a single documented suicide attack in 2002. Five attacks followed in 2004, before the phenomenon grew almost exponentially with 21 attacks occurring in 2005 followed by an extraordinary increase in suicide attacks in 2006. Although some estimates run as high as 139, the United Nations Assistance Mission in Afghanistan (UNAMA) has reported that there were 115 attacks where the bomber made it to the target and detonated a device.[40] Canadians were the target of 21 of those attacks, meaning that up to 18% of all suicide bombings carried out in Afghanistan in 2006 targeted the Canadian army.

Estimates for the 2007 tally also vary, but a United Nations report specified that there were 160 suicide bombings in Afghanistan over the course of the year, excluding incidents where the bomber was thwarted.[41] Of these attacks, only seven targeted



12 Dec. 2005 Kandahar, Afghanistan, Combat Camera Kandahar, Afghanistan

**A Canadian soldier examines the damage done to a Gelaendewagen (G Wagon) after a roadside bomb detonated close to the vehicle on 12 December injuring three Canadian soldiers and one foreign journalist.**

Canadians. The overall suicide attack figures for Kandahar province are hard to precisely define. However, reports in the Afghan national news media indicate that there were 51 suicide attacks in the province in 2006, followed by 42 in 2007.[42]

In terms of geographical distribution, all but one of the suicide bombings targeting Canadian forces occurred in Kandahar province. Canadian forces did not suffer any suicide attacks during their occasional operations in neighbouring Helmand province. A total of 18 of the 25 attacks in Kandahar province took place in or immediately around the city of Kandahar. Four reported attacks took place in the blood-soaked Panjwaii district, west of the city, two in the volatile Zhari district and one in the border town of Spin Boldak.

The only attack to happen outside of Kandahar province targeted a Canadian vehicle north of Kabul on a road linking the capital and the Bagram Airbase on 2 May, 2006.[43] Given the location of the bombing as well as indications that the targeted vehicle was not a regular military transport vehicle, it is likely that the personnel involved were either special operations forces or other soldiers involved in diplomatic or other security operations in the Kabul. The incident occurred at 8:45 that morning when a bomber in a white vehicle detonated his explosives.[44] He failed to inflict any injuries on the three soldiers in the targeted vehicle; however, a 20 year-old brick factory worker named Azatullah who was riding by on a horse-drawn cart was killed, as was the animal that was pulling him.[45] Afterwards, his countrymen carried his shrouded body away on a metal bed frame, another victim of Afghanistan's endless wars.[46]

## The American Experience

During the period in question, Canadian forces faced a proportionately greater number of suicide attacks than other NATO countries with large military contingents in Afghanistan; but, suicide bombers have also targeted American forces, the largest foreign military presence in Afghanistan, on at least 26 occasions. This number only includes attacks where the soldiers in question were clearly American. The tally is also restricted to incidents where an explosive device was actually detonated, as there have been a number of reported incidents involving American forces where would-be suicide bombers failed to detonate their explosives.

The prospect of erratic reporting also adds a dimension of frustration to this tabulation. Given that suicide attacks against American forces that are only fatal to the bomber often generate little in terms of American military press releases, the total attack number is inevitably understated. However, it is likely that it is not errant by a wide margin, given that there have only been a limited number of suicide attacks against international forces where the nationality of the troops in question was entirely unclear. Additionally, on at least four other occasions, American civilian contractors working in Afghanistan were the lone foreign victims of suicide attacks.

These 30 attacks killed four American soldiers and four civilian contractors. It should be noted that the Canadian casualty numbers are tilted upwards by the fact that it was the Canadian contingent that suffered the deadliest of all suicide attacks launched on coalition forces during the time period in question, the bombing that killed four soldiers in Kafir Band on 18 September 2006.

Although many of the attacks on American forces targeted convoys, there were also occasional attacks against well guarded bases of operation. In February 2007, an attacker blew himself up at the gates of the Bagram Airbase.[47] The previous month, a suicide bomber blew himself up outside Camp Salerno in the eastern Khost province, killing 10 Afghans, many of them reported to be civilians who were queuing up in hopes of finding work.[48] On 5 January 2007, according to an official NATO release, a suicide bomber drove a truck towards a "combat construction outpost" at high speed, prompting ISAF forces to open fire. Explosives in the truck detonated, wounding five ISAF personnel, but sparing a group of civilians at a nearby bazaar, in the Bermel district of Paktika province.[49] Although the nationalities of the soldiers were withheld from release, NATO forces in Paktika are almost exclusively American.

The above attacks all occurred in the north and east of the country. Attacks targeting Americans in the south typically followed the same patters as those that targeted Canadian forces. The vast majority of them involved lone bombers targeting vehicles. At least seven took place in Kandahar province and two in Helmand. In total, they killed one soldier, 2 civilian contractors and, according to press accounts, at least 16 Afghans.

IS2009-015916 February 2009 Kandahar, Afghanistan, MCpl Robert Bottrill, CF Combat Camera

**The disposal of munitions discovered as Improvised Explosive Devices (IEDs) results in a large explosion detonated by the Counter-IED team at Tarnak Farms, just outside Kandahar Airfield, Afghanistan, 16 February 2009.**

## The British Experience

British forces have been the targets of considerably fewer attacks than either Canadian or American forces. Part way through the 18-month period in question, the British military took responsibility for operations in one of Afghanistan's most volatile provinces, Helmand, which heretofore had only been the subject of sporadic operations by the international coalition. Despite the seemingly endless fighting in Helmand, suicide attacks on British forces were infrequent during the reporting period.

The number of suicide attacks that targeted British military forces during this timeframe stands, in the least, at five. This does not include a suicide bombing near a coalition base in Lashkar Gah, the provincial capital of Helmand, which wounded several passing Americans in April 2006.[50] A sixth attack targeted a group of British citizens, reportedly civilians working on an official advisory project. They were travelling in a two vehicle diplomatic convoy when they were subjected to an attack by a suicide bomber in Kandahar City on 9 October 2005.[51]

There is an inevitable possibility that in some of the attacks where the national identity of the troops was not available, the forces involved may have been British. Likewise, when assessing attacks against British forces, the possibility that not every attack was publically

reported cannot be discounted. However, all of the available evidence indicates that British forces have suffered only a fraction of the number of attacks endured by personnel from Canada and the United States. That said, three of the reported suicide attacks against British forces occurred in Helmand. One of the attacks, in October 2006, killed a Royal Marine while the other two attacks, in April 2006 and March 2007, did not result in serious injuries to British personnel.[52] All three of these attacks targeted convoys.

## Did the Attacks Specifically Target Canadian Forces?

The preceding data raise the question of whether Canadian forces are being specifically singled out for suicide attacks. At present, it is not possible to form definite conclusions on this point. Singling out Canadian forces would represent an insurgent bid to shear a country with a major role in the south of the country away from the coalition, thereby peeling off an ally of the Americans from the ground force in Afghanistan. However, other factors must be considered when contemplating the attack rate against Canadian forces. The fact that Canadian patrols and convoys frequently operate on Kandahar's paved highways certainly lessens the difficulty of carrying out suicide car bomb attacks. Moreover, Canadian forces have not relied extensively on helicopter transports to ferry soldiers and equipment around the province, leaving re-supply convoys on the ground open to attack. Reports surfaced both in May and October 2006 that British forces had avoided potential suicide attacks by suspending patrols in various areas of Helmand, including Lashkar Gah, in response to intelligence that suicide bombers were gathering in the area.[53] In contrast, there is no evidence to suggest that Canadian forces ever significantly limited the scope or the scale of operations to avoid suicide attackers.

The disparity in the number of attacks may also be a reflection of differing tactical preferences on the part of regional insurgent commanders. In Helmand province, for instance, the emphasis of the insurgency has focused more on ground combat between groups of Taliban fighters and British forces. The aforementioned Afghan media figures state that there were far fewer suicide attacks in Helmand overall than there were in Kandahar province with less than a dozen suicide attacks occurring in Helmand in 2006 followed by 21 in 2007.[54]

Researchers working on behalf of the United Nations Assistance Mission in Afghanistan discovered a possible reason for this during a series of interviews, including one with an unnamed Taliban commander based across the border in Quetta, Pakistan purportedly with close ties to the organization's leadership.[55] He commented that regional insurgent commanders remain deeply divided over the use of suicide bombers, a view that was reportedly corroborated by other sources familiar with the insurgency.[56] It is a tactic of war that has virtually no precedent among Afghans and some Taliban commanders, he stated, view it as an affront to Afghan traditions.[57]

## Conclusion

A number of conclusions can be drawn from the pattern of suicide attacks that have targeted Canadian forces in Afghanistan. Over an 18-month period, from 1 October 2005 to 31 March 2007, at least 26 suicide bombers targeted Canadian military personnel in Afghanistan. Although the attacks killed 11 Canadians, they did not significantly disrupt the scope or the scale of Canadian operations. Nevertheless, Canadians were the target of a proportionately greater number of reported suicide attacks than other major contributors to the Afghan mission. A variety of factors must be taken into consideration when contemplating this trend, including the accessibility of Canadian convoys on the province's paved highways and the possibility that insurgent commanders elsewhere have resisted the temptation to invest in suicide bombings as a method of warfare. The overwhelming majority of those who actually perished in the attacks were civilian bystanders. This number stands at approximately 49 and represents 82% of all deaths resulting from the 26 bombings.

When examining the attacks, changes in tactics are occasionally visible; however, these shifts were generally one-off events and did not mark the beginning of a trend away from the typical style of attack, sending a lone bomber in a vehicle to attack a convoy or patrol, with no follow-up attack. After the time period in question, there was a discernable shift in insurgent tactics away from suicide attacks in Kandahar towards the use of powerful roadside bombs. In the battle with coalition forces in Kandahar province, the dream of martyrdom amid the flash of a suicide bomb has been abandoned, at least for the moment, in favour of another bitter reality.

## About the Author ...

Andrew Fraser is a graduate of the University of Toronto and the Norman Paterson School of International Affairs. He is a candidate in the JD/LLB program at the Dalhousie Law School and the University of Detroit Mercy School of Law.

## Endnotes

1. The Jamestown Foundation, Waliullah Rahmani, “Combating the Ideology of Suicide Terrorism in Afghanistan” *Terrorism Monitor*, Volume 4, Issue 21, November 2, 2006 http://www.jamestown.org/terrorism/news/article.php?articleid=2370192 (Accessed July 27, 2007)
2. Françoise Chipaux, “Les talibans entraînent des kamikazes à montrer ‘la colère des Afghans’”, *Le Monde*, October 18, 2006
3. The Jamestown Foundation, Brian Glyn-Williams and Cathy Young, “Cheney Attacks Reveals Taliban Suicide Bombing Pattern”, *Terrorism Monitor*, February 27, 2007 http://www.jamestown.org/news_details.php?news_id=222 (Accessed March 8, 2007)
4. The United Nations Assistance Mission in Afghanistan, “Suicide Attacks in Afghanistan (2001-2007)”, September 9, 2007, p.17
5. Edith M. Lederer, “Afghan Insurgent Violence Up in 2007”, The Associated Press, March 11, 2008 http://ap.google.com/article/ALeqM5hkOyy6iVkNxhRAX9Mio7wSQxbnYQD8VB3CV02 (Accessed March 11, 2008)
6. Isambard Wilkinson and Imtiaz Ali, “British troops face suicide bomb campaign”, The Telegraph, May 11, 2006 http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2006/05/11/wtal11.xml&sSheet=/news/2006/05/11/ixnews.html (Accessed April 27, 2007)
7. Soraya Sarhaddi Nelson, “Disabled Often Carry Out Afghan Suicide Missions”, National Public Radio, October 15, 2007 http://www.npr.org/templates/story/story.php?storyId=15276485 (October 27, 2007)
8. The United Nations Assistance Mission in Afghanistan, “Suicide Attacks in Afghanistan (2001-2007)”
9. Sami Yousafzai and Ron Moreau, “Suicide Offensive”, *Newsweek*, April 16, 2007 http://www.msnbc.msn.com/id/17995553/site/newsweek/ (Accessed May 23, 2007)
10. Graeme Smith, “Forces’ new armour-plated vehicles withstood force of fatal explosion”, The Globe and Mail, October 6, 2005, A3.
11. CTV News on-line “Canadians suffer minor injuries in Afghan blast”, October 5, 2005 http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20051005/afghan_bomb_canada_051005/20051005/ (Accessed March 11, 2007)
12. Department of National Defence, News Release NR– 05.080, “Car bomb detonates near Canadian patrol”, October 5, 2005, http://www.forces.gc.ca/site/newsroom/view_news_e.asp?id=1775 (Accessed March 14, 2007)
13. The International Security Assistance Force, Release #2006-372, “Car bomb targets coalition convoy east of Kandahar City”, December 18, 2006. http://www2.hq.nato.int/isaf/update/press_releases/newsrelease/2006/pr061218-372.htm (Accessed March 13, 2007)
14. CTV News on-line, “Four Canadians killed in Afghan suicide bombing”, September 18 2006 http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20060917/suicide_bomb_afghan_060918?s_name=&no_ads= (Accessed March 10, 2007)
15. Department of National Defence, News Release CEFCOM NR–06.024, “Name of Deceased Soldier Released”, September 18, 2006. http://www.forces.gc.ca/site/newsroom/view_news_e.asp?id=2068 (Accessed March 13, 2007).
16. Department of Defense, American Forces Press Service, “Afghanistan Suicide Bombings Take Mostly Civilian Toll”, September 3, 2006, http://www.pentagon.mil/news/NewsArticle.aspx?ID=679 (Accessed March 14, 2007)
17. Human Rights Watch, “The Human Cost: The Consequences of Insurgent Attacks in Afghanistan”, Volume 6, Number 19(C), April 2007, p.4 http://www.hrw.org/reports/2007/afghanistan0407/afghanistan0407web.pdf (Accessed September 18, 2007)
18. *Le Monde*, Agence France Presse, Reuters, “Attentats dans le sud de l’Afghanistan : 21 civils et quatre soldats canadiens tués”, August 3, 2006.
19. Alastair Leithead, “Karzai condemns ‘cowardly’ bomb”, BBC News on-line, August 4, 2006 http://news.bbc.co.uk/2/hi/south_asia/5245432.stm (Accessed October 31, 2007)
20. Paul Watson, “Afghan suicide bomb kills 21, mostly children”, *The Pittsburg Post-Gazette*, The Los Angeles Times, August 4, 2006http://www.post-gazette.com/pg/06216/711095-82.stm (Accessed June 17, 2007)

21. *The International Herald Tribune*, The Associated Press, “Car bomb attack kills 21 in southern Afghanistan”, August 3, 2006 http://www.iht.com/articles/ap/2006/08/03/asia/AS_GEN_Afghan_Market_Blast.php (Accessed June 17, 2007)
22. CTV News on-line, “Four Canadians killed in Afghan suicide bombing” and CTV News on-line, “Two Canadian soldiers killed in Afghanistan”, October 3, 2006 http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20060813/afghanistan_attack_061003/20061003/ (Accessed March 13, 2007)
23. The Department of National Defence, Minutes of Proceedings, Part I, “Suicide Bomber – Kandahar Afghanistan - 15 January 2006 - Board of Inquiry”, October 23, 2007, p.8 http://www.forces.gc.ca/site/focus/15JAN06/15JAN06_part1_e.pdf (Accessed October 24, 2007)
24. CTV News on-line, “2 Canadians killed in Afghan suicide bombing”, July 22, 2006 http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20060718/afghanistan_template_060722/20060722?hub=TopStories (Accessed March 10, 2007)
25. The Department of National Defence, News Release CEFCOM NR-06.012, “Two Canadian soldiers killed, eight wounded in Afghanistan”, July 22, 2006 http://www.forces.gc.ca/site/newsroom/view_news_e.asp?id=1997 (Accessed March 14, 2007)
26. CTV News on-line, “Blasts rock Afghan airbase housing Canadians”, March 31, 2006 http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20060330/afghanistan_canada_060330/20060330?hub=TopStories (Accessed March 13, 2007)
27. Rosie DiManno, “In attack on Canadians, boy is ‘collateral damage’”, *The Toronto Star*, March 31, 2006, A8.
28. ABC News on-line(the Australian Broadcasting Corporation) “Suicide bomber misses Canadian convoy”,March 30, 2006 http://www.abc.net.au/news/stories/2006/03/30/1605080.htm (Accessed October 31, 2007)
29. Christie Blatchford, “Never too early for a ‘suicider’”, *The Globe and Mail*, March 29, 2006, A1
30. Cyberpresse.ca, *Presse Canadienne*, “soldats canadiens blessés dans une embuscade”, March 28, 2007 http://www.cyberpresse.ca/article/20070327/CPACTUALITES/70327196/5846/CPACTUALITESDeux (Accessed April 1, 2007)
31. John Cotter, “Attack on convoy injures 2 Canadians; troops gird for more spring violence”, CBC News on-line, *The Canadian Press*, March 27, 2007 http://www.cbc.ca/cp/world/070327/w032747A.html (Accessed September 28, 2007)
32. Governor General of Canada, “Governor General Announces the Award of a Meritorious Service Decoration (Military Division) and 27 Mentions in Dispatches”, October 2, 2007. http://gg.ca/media/doc.asp?lang=e&DocID=5193 (Accessed October 12, 2007)
33. Kim Sengupta, “First, I heard a deafening crash as the suicide bomber drove his vehicle headlong into the Nato convoy. It was followed by a blast that roared through the crowded streets. Then the flames began to erupt”, *The Independent*, December 4, 2006. http://news.independent.co.uk/world/asia/article2037428.ece (Accessed April 27, 2007)
34. BBC News on-line, “Afghan suicide attack kills six”, December 6, 2006 http://news.bbc.co.uk/2/hi/south_asia/6212450.stm (Accessed March 14, 2007)
35. Declan Walsh, “Troops under investigation for Kandahar shooting spree; Fury in Afghan city after targeted British convoy kills civilians”, *The Guardian Unlimited*, December 9, 2006 http://www.guardian.co.uk/afghanistan/story/0,,1968064,00.html (Accessed March 14, 2007)
36. Paul Koring, “Fingers on triggers, then split-second decisions”, *The Globe and Mail*, November 15, 2007.
37. CTV News on-line, “Cdn. killed, 3 hurt in Afghanistan suicide attack”, August 22, 2006 http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20060813/afghanistan_blasts_060821/20060822?hub=TopStories (Accessed March 10, 2007)
38. The International Security Assistance Force, Release #2006-108, “ISAF vehicle patrol attacked by suspected suicide car bomber”, August 22, 2006 http://www.nato.int/isaf/docu/pressreleases/2006/Release_22August06_108.htm (Accessed September 29, 2007)
39. Edith M. Lederer, “Afghan Insurgent Violence Up in 2007”, *The Associated Press*, March 11, 2008 http://ap.google.com/article/ALeqM5hkOyy6iVkNxhRAX9Mio7wSQxbnYQD8VB3CV02 (Accessed March 11, 2008)
40. Glyn-Williams and Young, “Cheney Attacks Reveals Taliban Suicide Bombing Pattern”
41. Lederer, “Afghan Insurgent Violence Up in 2007”
42. Javed Hamim, “2007 ends with 137 suicide attacks in Afghanistan”, *Pajhwak Afghan News Agency*, January 1, 2008 http://www.afgha.com/?q=node/5510 (Accessed March 14, 2008), and The PakTribune, “Afghanistan’s record of suicide attacks in 2006”, January 6, 2007 http://www.paktribune.com/news/index.shtml?165055 (Accessed March 14, 2008)
43. CBC News on-line, “Minor damage to Canadian vehicle in bombing near Kabul”, May 2, 2006 http://www.cbc.ca/world/story/2006/05/02/afghan-attack-060502.html?ref=rss (Accessed March 11, 2007)
44. *Middle East Times*, “Suspected suicide bomber kills self, one other in Afghanistan”, May 2, 2006 http://www.metimes.com/storyview.php?StoryID=20060502-061629-8779r

(Accessed March 11, 2007)
45. CBS News on-line, "Week In Photos, April 24 - May 7: Afghan Bomb", May 8, 2006 http://www.cbsnews.com/elements/2006/05/08/indepth/photoessay1597988_0_7_photo.shtml (Accessed October 24, 2007)
46. Militaryphotos.net, Associated Press Photo/Rodrigo Abd, Caption: "Villagers carry the plastic blanket-wrapped body of Azatullah, a brick factory worker killed after a suicide attack next to a military convoy, north of Kabul, Afghanistan", May 2, 2006 http://www.militaryphotos.net/forums/showthread.php?t=80041 (Accessed March 11, 2007)
47. Abdul Waheed Wafa, "Cheney Unhurt After Bombing in Afghanistan", *The New York Times*, February 27, 2007 http://www.nytimes.com/2007/02/27/world/asia/27cnd-cheney.html?_r=1&hp&oref=slogin (Accessed October 17, 2007) and Glyn-Williams and Young, "Cheney Attacks Reveals Taliban Suicide Bombing Pattern", and USA Today, The Associated Press, "Suicide bomber attacks foreign convoy south of Kabul", January 12, 2007, http://www.usatoday.com/news/world/2007-01-12-afghan_x.htm (Accessed May 4, 2007)
48. Amir Shah, "Suicide Bomber Kills 10 in Afghanistan", The Associated Press, *The Washington Post*, January 23, 2007 http://www.washingtonpost.com/wpdyn/content/article/2007/01/23/AR2007012300106.html (Accessed May 2, 2007)
49. The International Security Assistance Force, Release #2007-020, "ISAF soldiers prevent vehicle borne suicide bomb attack", January 6, 2007 http://www.nato.int/ISAF/Update/Press_Releases/newsrelease/2007/pr070106-020.htm (May 19, 2007)
50. BBC News on-line, "Afghanistan hit by triple bombing", April 9, 2006 http://news.bbc.co.uk/2/hi/south_asia/4892782.stm (Accessed May 18, 2007)
51. BBC News on-line, "Suicide blast wounds four Britons", October 9, 2005 http://news.bbc.co.uk/2/hi/south_asia/4323738.stm (Accessed May 8, 2007)
52. The Telegraph, "Suicide attack Marine named", October 21, 2006 http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2006/10/20/usoldier.xml (Accessed March 19, 2007)
53. Raymond Whitaker, "Troops 'locked down' by suicide bombers", The Independent, October 29, 2006 http://news.independent.co.uk/world/politics/article1938392.ece (Accessed September 6, 2006)
54. Hamim, "2007 ends with 137 suicide attacks in Afghanistan", and The PakTribune, "Afghanistan's record of suicide attacks in 2006".
55. UNAMA, "Suicide Attacks in Afghanistan (2001-2007)", p.67
56. Ibid. p.68
57. Ibid. p.68

# THE TRUE NORTH STRONG AND FREE FOR THE TAKING? THE NEED FOR CANADA TO APPLY THE WHOLE OF GOVERNMENT APPROACH IN THE PURSUIT OF ARCTIC SECURITY

**Major C. Braddon**

In Canada, the traditional approach to dealing with Arctic security issues can be characterized as reactionary and ad-hoc. History shows that Canadian governments have found it far easier to let the Arctic take care of itself and only apply tools of national power when forced to do so by the outside world, and then only to do so for a short duration and at a minimum of intensity. However, due to the confluence of climate change, 21st century technology and the increasingly fierce competition for access to natural resources, Canada's historic Arctic security strategies are presently insufficient. This article argues that the Federal Government should pursue a whole of government approach if it hopes to properly meet the rapidly changing, and increasingly complex, Arctic security situation.

## Introduction

The belief that the Arctic naturally and indisputably belongs to Canada is firmly embedded in the Canadian psyche, as the allusion to the national anthem in the title suggests. For most of the 20th century, principally due to the remote and harsh climate, the Arctic looked after itself giving Canada the luxury of being able to expend little effort to ensure the Arctic was indeed Canadian and secure.[1] However, at the dawn of the 21st century the factors that made this possible no longer exist. Climate change and the race to exploit what remains of the globe's natural resources are drawing the world north, and Canadians must begin to view Arctic security from a different perspective. It is now a strategic imperative, rather than a strategic option, and the Federal Government must pursue a comprehensive, top down whole of government approach if it hopes to properly meet the rapidly changing, and increasingly complex, Arctic security situation.

To better understand the context of the issue, a few thoughts on the meaning of the word security must be offered to briefly highlight how Canada dealt with Arctic security during the 20th century, and to show how the strategies of that century are no longer adequate. However, there are aspects of the 20th century paradigm that are applicable for the next century and these should be acknowledged as such and used as the platform upon which to proceed. The second portion of this article describes the security situation that exists today, explaining why it is clearly different than in the past. Next, Canada's incoherent and inadequate Arctic security policy framework will be exposed. Without having a coherent body of policy (the intellectual piece that states what Canada wants to achieve and how), the enabling capabilities (the physical piece that gives Canada the ability to enact and enforce its policies) are immaterial. The article concludes by providing some thoughts as to why a whole of government approach is the most suitable framework upon which to provide security in, and to, the region.

## Arctic Security Defined

There have been numerous books, journal articles and newspaper entries written about Arctic security in the last few years.[2] Despite the amount of writing on the subject a commonly accepted definition is difficult to find. To add to the vagueness, the word

sovereignty is also often used. At times theses two words are used to denote different concepts and at other times they are used inter-changeably. University of Calgary Professor Rob Huebert contends that they are not "mutually exclusive concepts, but are different terms for the same requirement—regional control…the ability of a state to make and enforce laws and regulations."[3] Historian Jack Granatstein prefers the word sovereignty on its own, but offers a similar opinion as to the desired outcome, "the ability to control who does what" in the Arctic.[4] Canada's *National Security* Policy (NSP) offers little assistance as its definition of national security uses, confusingly, the word security in the definition.[5] However, the NSP does state that the ultimate goal is to protect the physical security of Canadians and to defend against threats to Canadian territory.[6] Another concept that is woven through the security literature is the notion that a state must be able to demonstrate effective stewardship and responsibility in order to preserve and promote the safety, health, prosperity and well-being of its citizens.[7] All of these concepts will be used to form the definition of security adopted in this article.

To be secure *means that* the state has the ability to sense and respond to all challenges to its legal authority and man made or natural events that threaten the nation's interests or the well being of its citizens at all times and in all places. These challenges and events can be unauthorized territorial intrusions, environmental disasters, damage to the fragile ecosystem that sustains the traditional way of life, illegal fishing, petty crime, disease outbreaks, or irresponsible and unsustainable resource development.[8] Clearly, this state of absolute security is purely theoretical and is a goal that will always be pursued but never really achieved. This definition is broad and encompasses activities that have traditionally not been considered part of the security equation. A concomitant reality is that the state's security architecture must also be broadened in a similar fashion. A whole of government approach is an ideal organizational construct to achieve this.

## Historical Approach—The Arctic Will Look After Itself

The traditional Canadian approach to dealing with Arctic security issues can be characterized as reactionary and ad-hoc. Canadian governments have found it far easier to let the Arctic take care of itself and only apply tools of national power when forced to do so by the outside world, only doing so for a short duration and at a minimum of intensity.[9] As Dr. Huebert has acidly and accurately noted:

> *It appears that the responsibility to protect the North has been viewed by Canadian governments as too demanding, and they have preferred to pretend there were no problems and hope for the best.*[10]

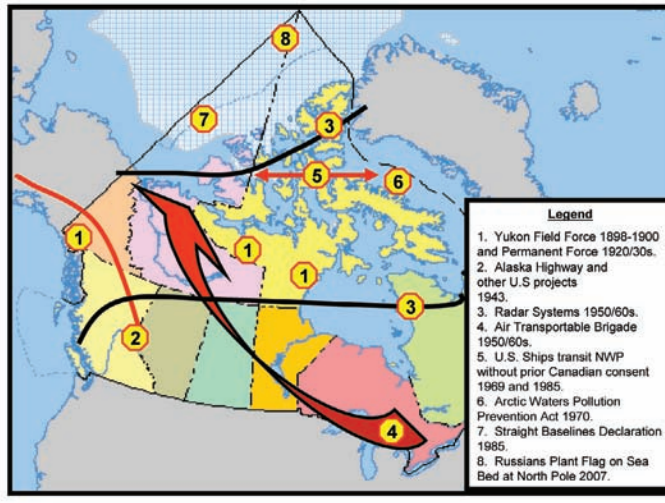



**Figure 1: Significant security/sovereignty milestone in the Arctic region.**

Eventually the threat, whatever it was, went away. Figure 1 depicts the significant, from the Canadian perspective, security milestones since 1898.[11]

In the early years of the last century, the Yukon Field Force was deployed to fill a policing role in the Arctic while the Royal Canadian Air Force and Signal Corps of the Permanent Force operated in the region to "support national development activities."[12] After WW II, Prime Minister Mackenzie King protected Canadian sovereignty by employing economic tools of statecraft when he reimbursed the Americans for the cost of the Alaska Highway.[13] The *Arctic Waters Pollution Prevention Act* (1970) and the *Straight Baselines Declaration* (1985) were diplomatic responses to what Canada viewed as unauthorized incursions into Canadian territory by U.S. vessels.[14] Their ad-hoc and reactive natures notwithstanding, these are all examples of a whole of government approach, admittedly very immature and haphazard examples, but a whole of government approach nonetheless. This is a little known, yet important, legacy which Canadian policy makers can use to their advantage.

## Current Security Situation—There is Much to Lose

Why is there a renewed interest in Arctic security in Canada? There are four contributing factors: the terrorist attacks on September 11, 2001 changed the continental security paradigm; climate change is making the Arctic commercially accessible; the global demand for energy, minerals and biological resources is drawing the world north; and a series of well publicized incidents in which Canadian sovereignty was openly challenged has re-focussed the public's attention on the issue.[15]

During the 20th century, the climate and geography of the region were stronger forces than the available technology as mankind simply did not possess the machines, or the desire, to access the region in a significant and sustained manner. However, the balance of power between climate and technology is shifting. Climate change is melting the Arctic's natural resistance to intrusion[16] while 21st century technology is giving humans the ability to operate in the region. This phenomenon is being reinforced by the increasingly competitive race to secure what remains of the Earth's resource base, particularity oil and gas.[17]

The Arctic has the potential to provide future generations of Canadians an enormous amount of wealth. According to the U.S. Geological Survey, the Arctic contains twenty-five percent of the world's undiscovered energy resources. Others estimate that fifty percent of the globe's remaining hydrocarbons are located north of the Arctic Circle.[18] Natural Resources Canada predicted in 2005 that the development of the Mackenzie Valley Pipeline would generate over seven billion dollars in new investments and ten billion dollars are expected to be invested in exploration and mining for diamonds, gold, silver, zinc and other metals by 2015.[19] The world is coming to the Arctic and nothing is going to stop it.[20] This will no doubt exacerbate the tensions underpinning the six major territorial issues that have a significant impact on Canadian interests (see Figure 2).[21]

The most famous, and for Canadians the most emotional, territorial dispute concerns the legal status of the Northwest Passage. Canada views the Passage as an internal waterway, while the U.S. and most of the rest of the world believe that it is an international strait. More importantly, Canada and the U.S. have for years been 'sparring' over the precise location of the international boundary in the Beaufort Sea. The two nations disagree as to where the maritime boundary is, as it runs from the land into the water and there is a sizeable wedge of oil-bearing seabed in dispute.[22] The eventual outcome of these two disputes will not be known for years, but the point for Canadian policy makers in 2008 is that in the future even Canada's 'friends' may not be afraid to become fierce competitors in the pursuit of dwindling energy resources.[23]

The recent activities in the Arctic by an increasingly aggressive and hostile Russia further complicate the Arctic security puzzle. Interestingly, the Russians are also pursuing a whole of government strategy to further their Arctic interests. For example, in the summer of 2007, while mapping the continental shelf in accordance with the requirements of the United Nations Convention on the Law of the Sea (UNCLOS) Article 76, Russian scientists planted a Russian flag at the North Pole—on the ocean floor.[24] The legal implications of this act

are probably inconsequential, but the Russians nevertheless demonstrated that they have an unmatched ability to operate throughout the region and seem more than willing to use that monopoly to expand their economic and territorial influence and control. Militarily, the Russians have reverted to the Cold War tactic of flying strategic bombers near the sovereign airspace of Canada, the U.S and other NATO Arctic nations.[25] While the full impact of this aggressive behaviour remains unclear, the similarities with Cold War behaviour are obvious. Russian activity in the region will, once again, inevitably draw security-conscious American eyes northward. Canada must be in a position to credibly assist in responding to Russian challenges in the Arctic or run the risk of having the Americans do it on Canada's behalf, and without Canada's consent. No mention has been made of other emerging powers in this example, but it is well known that China and India are also eyeing the Arctic's resources and it remains to be seen how aggressively they intend to pursue access to the region.[26]

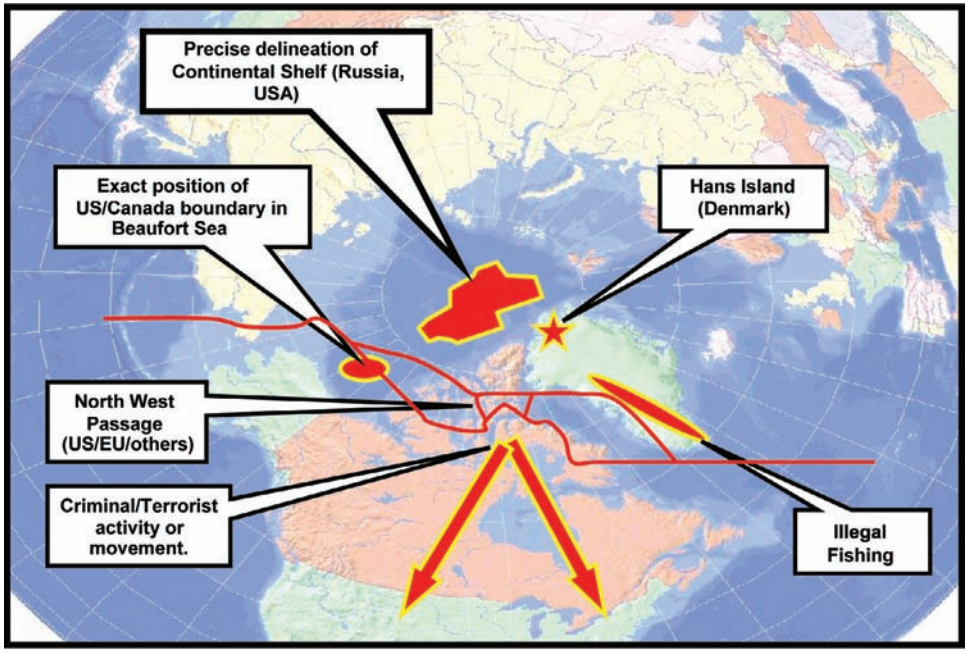



**Figure 2: The significant territorial/security disputes in the Arctic**

There are also security considerations that have their genesis with the 9/11 attacks in the United States and the resultant recasting of the continental security paradigm. Due to Canada's meagre surveillance capability in the region, the current security apparatus does not know who is actually in the North.[27] While it is highly unlikely that the Arctic will ever become a high-volume illegal transit route into North America, the 9/11 attacks proved that it takes only a handful of motivated individuals to cause a catastrophe.[28] If the U.S. perceives—and American perception is reality in the post 9/11 world—that Canada cannot control who enters the country via the Arctic, it will no doubt result in further thickening of the U.S.—Canada border.[29] An outcome such as this would no doubt serve as the catalyst to finally break Canada's apathy towards the security situation in the region.

It is imperative that Canada now begin to set the security conditions that will ensure that the Arctic, and all its potential, remains under Canadian control and that all resource extraction activities are conducted for the benefit of Canadians and in accordance with Canadian laws and regulations. While most experts agree that Canada's ownership of the all land in the Arctic is universally accepted,[30] no one can predict how fierce the competition for resources will become in the next 50-100 years. The reality that Canada may someday need to secure the Arctic with coercive tools of national power should not be discounted.[31]

## An Incoherent Policy Framework

Canadian governments, from time to time, have attempted to develop a comprehensive security policy framework for the Arctic, but have either failed to complete the policy formulation task or have failed to adequately fund any of the ensuing initiatives, or most often have failed to do both.[32] The situation in 2009 is no different. An overview of the major federal policy documents would leave an observer with the impression that there is a "disjointed acknowledgement of the importance of the North."[33] Predictably, and in keeping with Canadian historical tradition, none of these documents provides an over-arching policy framework that coordinates and synchronizes the efforts of the various federal, provincial and territorial stake holders.

In June 2000, the federal government published *The Northern Dimension of Canada's Foreign Policy*.[34] This document stated four broad Arctic policy thrusts:

- to enhance the security and prosperity of Canadians, especially northerners and Aboriginal peoples;
- to assert and ensure the preservation of Canada's sovereignty in the North;
- to establish the Circumpolar region as a vibrant geopolitical entity integrated into a rules-based international system; and
- to promote the human security of northerners and the sustainable development of the Arctic.[35]

Despite the fact that federal governments, both Liberal and Conservative, have tabled various policy documents in the intervening years, these four points remain at the heart of Canada's Arctic policy. The 2004 *National Security Policy* was the first formal articulation of a Canadian national security policy, but it did not deal with the Arctic directly. It did highlight the need to strengthen inter-agency cooperation and improve marine security.[36] The 2005 *International Policy Statement*: *A Role of Pride and Influence in the World* (IPS) followed the same pattern, albeit with a few more details. The parent document of the series refers to the *Northern Dimension of Canada's Foreign Policy and the National Security Policy* (NSP) and states that key initiatives included, among other things, an improvement to Canada's maritime, land and air surveillance capabilities and an increase in the Canadian Forces' capacity to monitor and respond to events in the North.[37] As well, the IPS (in the main document and the defence chapter) obliquely speaks of the need to increase inter-departmental cooperation with the aim of ensuring that all security issues are dealt with in a coordinated and comprehensive manner.[38] While an improvement over previous policy documents, neither the NSP nor the IPS provided any real specifics as to how the interdepartmental coordination was going to be achieved nor what specific capabilities were going to be developed.[39]

In early 2006 a new government was elected in a campaign in which Arctic security was an issue of some significance. On 22 December 2005, Stephen Harper stated that if he were to become Prime Minister there would be a renewed emphasis on protecting and enhancing Canadian security in the Arctic. He promised that a Conservative Government would purchase and station three armed icebreakers in the Iqaluit area, establish a deep-water port, build a permanently manned Arctic training center, develop underwater sensor systems, station new search and rescue aircraft in Yellowknife, revitalize and increase the ranks of the Canadian Rangers and task the Army to provide an emergency response capability based at CFB Trenton.[40]

In the summer of 2007 Prime Minister Harper announced a somewhat less ambitious military program for the Arctic. In August he announced that the deep-water port and army training base would indeed be built, but that Arctic patrol ships, while perhaps numbering as many as eight vessels, would not be able to patrol all of Canada's Arctic waters during the winter months.[41] The next significant announcement came in February 2008. In a speech to the Yellowknife Chamber of Commerce the Prime Minister emphasized the fact that the

2008 Budget, tabled a few weeks prior, allocated funds to purchase a Polar Class icebreaker, announced that a commercial harbour would be built in Pangnirtung and re-announced the Government's obligation to map the continental shelf in the region.[42] Most of the other campaign promises made two years earlier remain unfulfilled. Harper also spoke about a "comprehensive vision for a new North, a Northern Strategy that will turn potential into prosperity for the benefit of all Northerners and all Canadians."[43] The Northern Strategy of 2008 is built on four pillars:

- strengthening Canada's Arctic sovereignty;
- protecting the fragile northern environment;
- promoting economic and social development; and
- giving Northerners more control over their economic and political destiny.[44]

The similarity between the four 'new' pillars and the 'old' pillars contained in *The Northern Dimension of Canada's Foreign Policy* that was published by the Liberals eight years earlier is quite evident. The federal Arctic security strategy has been re-branded with new graphics and logos, but it has been adopted nearly verbatim by the Harper Government.[45]

Despite any partisan claims to the contrary the de facto Arctic policy has remained constant since 2000 and appears to be completely consistent with Canada's historic 'way of Arctic' security. Dr. Huebert observed in 2007 that "the factors that have pushed Canadian policy makers to re-examine Arctic security will not soon dissipate" and that "Canada is now experiencing a renaissance in how it addresses the issue of Arctic security."[46] However, Huebert was only half right. The external factors are definitely not going to conveniently go away, but it is far from certain that there has been a true renaissance in how the Government addresses Arctic security. Canadians will have to wait and see if the rhetoric and funding promises are actually translated into concrete action. History indicates that the odds of this happening are not high.

## The Whole of Government Approach

Despite the pessimistic conclusion drawn at the close of the last paragraph, there are positive aspects upon which coherent and effective Arctic security architecture can be crafted. The recent acceptance by policy makers from all points on the political spectrum that security challenges in the post 9/11 world must be met by a whole of government approach is a good first step. In order to comprehensively address a particular security issue many government departments must work in a coordinated and mutually supportive manner. Implicit in this construct is the notion that a lead ministry or department is given the authority, responsibility and competencies to effectively fill the role. While the various policy papers that have been published since 2000 have not provided any specifics with respect to the Arctic, the seeds of this concept are contained therein. Additionally, Canada is applying a whole of government approach to other security issues—the creation of Public Safety Canada and the strategy towards Afghanistan offer two prominent examples.

The first action the Government must undertake is to stop focusing solely on the Northwest Passage. Canadians confuse, at the urging of the Government and to their own detriment, an arcane legal argument over whether or not the Passage is an internal or international waterway as a challenge to the sovereignty of the entire Arctic. Emotional sentimentalism such as this keeps Canadians from seeing what the real issues are and prevents policy makers from pursuing an effective broader security strategy. Arctic security is much more than the international legal status of the Passage and it is very unlikely that the waterway will ever see large scale trans-polar marine traffic in any event. (See Figure 4 for explanation).[47]

The *Arctic Waters Pollution Prevention Act*, the related UNCLOS Article 234 and a host of other laws provide the statutory teeth needed to protect Canada's real interests.[48] What are lacking are the physical capabilities to enforce those laws on the ice and waters of the

region. The fact that the NORDREG Arctic marine traffic system is voluntary[49] indicates that Canada does not have the ability, or possibly the desire, to enforce its own laws. There is an important distinction between *de jure* and *de facto* security. The Government must lead and begin to pursue policies that close the gap between the two.


If the polar ice cap recedes over the next century as predicted, large scale commercial trans polar shipping traffic may become viable. However, the complex ice infested waters of the Canadian Arctic archipelago will not be the preferred route. Canada will no doubt see increased traffic to and from Canadian Arctic destinations, and therefore Canadian rules and regulations will be easy to enforce. The status – Canadian territorial waters or international strait - of the Northwest Passage is not a critical issue and should not be allowed to cloud Canadian thinking with respect to Arctic security.

**Figure 3: The Northwestern, Northeast and Northern Passages**

The Government should also move to solve the Beaufort Sea dispute with the U.S. as soon as possible. Perhaps by giving the U.S. what it wants vis-à-vis the legal status of the Northwest Passage (where there is nothing to lose), Canada might be able to negotiate a more favourable outcome with respect to the Beaufort Sea boundary (where there is a significant amount of oil wealth at stake).[50] Interestingly, the U.S. has let its capability to

operate in the Arctic atrophy in the recent past.[51] Canada should seize the opportunity to develop capabilities that could be used as leverage in solving the territorial disputes in ways that are advantageous to Canada. The aim is not to treat the U.S. as an adversary but to reinforce the partnership by becoming a more capable, and therefore more valuable, partner. At the same time, Canada would be quietly confident in the knowledge that it possessed the capability to act unilaterally if the need arose.

Once the issue of the Northwest Passage has been placed in perspective and the process of finding lasting solutions to the other territorial disputes started, the Government must begin developing an effective and all encompassing Arctic security strategy. The three key elements of this would be policy coherence, leading to the development and deployment of surveillance and enforcement capabilities.[52]

Figure 4 depicts the main federal agencies that have a role to play in Arctic security.[53]

| Federal Agencies Involved in the Comprehensive Arctic Security Network | |
|---|---|
| Canadian Forces | Ensure sovereignty and security of territory, airspace and maritime approaches |
| Department of Indian and Northern Affairs and Northern Development | Aboriginal liaison and economic development |
| Foreign Affairs and International Trade Canada | International issues |
| Department of Fisheries and Oceans | Fisheries Regulation and Protection |
| Transport Canada | Transport and surveillance |
| Environment Canada | Meteorological and ice reporting services |
| Circumpolar Conference | Arctic States |
| Public Safety Canada | Emergency preparedness |
| Coast Guard | Coastal safety and icebreaking support |
| RCMP | Law enforcement |
| Canadian Space Agency | Provide Satellite imagery to all departments |

**Figure 4: Federal Agencies that contribute to the comprehensive security network in the Arctic.**

The list is not exhaustive; it makes no mention of the primary stakeholders—the indigenous people of the Arctic—nor does it mention provincial or territorial bodies. It is merely offered to depict the complex nature of the inter-departmental security network.

Truly effective Arctic security can only be achieved by pursuing a whole of government approach that can force horizontal coordination across the traditional departmental stovepipes.[54] This will require a cultural transformation within the various bureaucracies so that the relevant agencies think and operate with a country-first rather than a department-first mindset.[55] A fundamental transition in the underlying corporate culture will take years

of sustained effort from the prime ministers, ministers and deputy ministers who will be involved.[56] Admittedly, no system involving this many government departments will ever be entirely free of inter-departmental rivalries and competition, but a properly empowered and politically supported lead ministry should reduce the 'friction of bureaucratic politics' as much as possible. However, in 2009, Canadians are simply not prepared to invest massively in Arctic security capabilities, and therefore the Government will not do so as "there are no votes in it."[57] Nevertheless, the creation of a 'Department of Arctic Affairs' should be inexpensive enough to be politically acceptable. If properly organized and supported it would provide the intellectual architecture now so that the surveillance and enforcement capabilities available today can be managed in an optimal fashion, while realistically and intelligently developing and planning the implementation of the capabilities required for the future. Obviously many government departments have a role to play, and are playing a role, but is Canada developing the capabilities to effectively respond to the security challenges of 2020 or 2060? The question is unanswerable as there is no single government agency tasked to provide the answer.

The first remit that the lead ministry should provide the Government is a comprehensive strategic assessment. This assessment must clearly define the current security situation and predict the threats and challenges that will be encountered in the near, mid and long term. A risk analysis would also be drawn out of the strategic assessment.[58] An objective risk assessment would permit the prioritization and allocation of scarce resources to where they are needed most. There is time as the emerging threats will not be fully developed until some years in the future; however, the intellectual activities must begin now if Canada has any hope of fielding adequate physical capabilities in a timely manner.[59]

Once the assessment and corresponding policy regime is in place the next step will be the development and deployment of the requisite surveillance capabilities to ensure Canada can sense what is happening in the region. This is not to say that Canada does not have any surveillance capability at this point in time, but it is clear that there are capability gaps.[60] The final piece in the security triad is the ability to decisively respond throughout the region in support of Canadian interests. This primarily speaks to the need to enforce Canadian laws and regulations, but also encompasses other vitally important security activities such as search and rescue, disaster response and environmental protection and clean-up.[61]

Canada needs to be able to know what is happening in the Arctic and have the ability to respond in an effective fashion. Fortunately, Canada has experience in this field. The Joint Rescue Coordination Centres in Halifax, Trenton and Victoria[62] are essentially whole of government entities that coordinate multi-departmental responses. This model would have to be expanded to respond to the full range of security issues that the Arctic will face in the years to come. Perhaps this is a task that should be given to the Canadian Forces Joint Task Force (North) as the Commander of the formation chairs the Arctic Security Interdepartmental Working Group.[63] This is a forum for the departments that have a stake in the Arctic to meet, share information and coordinate their activities. Unfortunately, it is a voluntary organization and neither participation nor action can be demanded by a lead ministry.

The Arctic Security Interdepartmental Working Group is another example of an existing organizational construct upon which something useful and effective can be built. Whichever ministry is designated as the lead, it must be able to collect and analyse information from the departments shown in Figure 4 and other stakeholders, and then direct a coordinated response. It is easy to imagine that information obtained from the Canadian Space Agency and the Radarsat II satellite triggering the dispatch of a Canadian Forces Arctic Patrol Vessel with an embarked Department of Fisheries and Oceans officer to investigate a vessel suspected of conducting illegal fishing off the coast of Baffin Island. It matters not which ministry has the lead; what matters is that Canadian security, interests and laws are decisively upheld and enforced.

The establishment of coherent security strategy and inter departmental policy framework supported by a robust surveillance and enforcement regime is valuable in its own right, as this is what a serious and mature G8 nation ought to do.[64] But in addition to that, a whole of government approach will provide the ability to operate and demonstrate responsible

stewardship throughout the Arctic. This will only serve to reinforce Canadian territorial claims in the international arena and with it Canada's ability to ensure all the resource wealth accrues to future generations of Canadians. If this goal is too ambitious, politically or economically, to be implemented now, it is entirely acceptable to proceed in a phased manner. However, it is vital that the process start today.

## Conclusion

The security challenges facing Canada in the Arctic are complex. In 2008 security is not just about the protection of territory. It is increasingly seen to involve the ability to control and demonstrate effective stewardship and state responsibility.[65] Due to the confluence of climate change, 21st century technology and the increasingly fierce competition for access to natural resources, Canada's historic Arctic security strategies are insufficient. Canada can no longer afford to substitute rhetoric for sustained and realistic action. Despite recent policy announcements by Prime Minister Harper, a careful analysis shows that there do not appear to be any substantive changes in the way Arctic security is being pursued by Canada. This tradition of pursuing Arctic security through the periodic application of reactive and loud rhetoric must stop. The region has the potential to help preserve Canada's position as one of the wealthiest nations on Earth for decades to come, but only if the region is exploited in accordance with Canadian priorities and in support of Canadian interests.

This article has argued that to realistically respond to 21st century Arctic security challenges the government must pursue a comprehensive, top down whole of government approach. This approach would require that a lead ministry be nominated and properly empowered to force horizontal integration across the traditional departmental stovepipes allowing Canada to develop a realistic and comprehensive strategic security assessment. Given that the Canadian public, at this time, seems unwilling to spend vast amounts of the national treasury on Arctic security, the development of the intellectual portion of the security architecture is what is politically achievable now. After the structure is in place and the strategic assessment completed, the development and deployment of the more expensive physical capabilities can occur when the political climate so allows. This will ensure that when Canadians decide the time is right to heavily invest in the Arctic, the Government will be in a position to invest wisely.

No one knows for certain what the future has in store. However, it is clear that the Arctic will be more accessible in the years to come—and the world will be coming. Providing adequate security in, and to, the region is now a strategic imperative and truly serious action must start today. Canadians of the 22nd century deserve, and will accept, no less.

## About the Author ...

LCol Craig Braddon joined the Canadian Forces in 1987 and graduated from the Royal Military College of Canada in 1991 with a Bachelors degree in Engineering Management. He is an Engineer officer who has served with 21 Engineer Regiment (British Army), 2 Combat Engineer Regiment (Petawawa) and 1 Combat Engineer Regiment (Edmonton). He obtained a Masters of Arts in War Studies in 2004 and recently completed the Joint Command and Staff Program at Canadian Forces College in Toronto. He is currently serving on the Army G3 staff at Land Force Headquarters in Ottawa.

## Endnotes

1. Rob Huebert, "Reinforcing Sovereignty, National Security and Circumpolar Cooperation," *Northern Perspectives* 30, no.1 (Winter 2006): A search of the internet using the Google search engine returned over 1 million hits. The search parameters were "Canadian Arctic Security" dated within the last year. Admittedly, this is a very unscientific survey, but it does provide a sense of how often the issue is being discussed. Search conducted on 4 April 2008.
2. A search of the internet using the Google search engine returned over 1 million hits. The search parameters were "Canadian Arctic Security" dated within the last year. Admittedly, this is a very unscientific survey, but it does provide a sense of how often the issue is being discussed. Search

conducted on 4 April 2008.
3. Rob Huebert, "Renaissance in Canadian Arctic Security?" *Canadian Military Journal* 6, no.4 (Winter 2005-2006): 28.
4. Jack Granatstein, *Whose War Is It? How Canada Can Survive in the post 9/11 World* (Toronto: HarperCollins Publishers Ltd., 2007), 110.
5. Privy Council Office, *Securing an Open Society: Canada's National Security Policy* (Ottawa: Privy Council Office, 2004), 3. To quote the NSP, "National security deals with threats that have the potential to undermine the security of the state or society."
6. *Ibid.*, 5.
7. Library of Parliament, Canadian Arctic Sovereignty (Ottawa: Parliamentary Information and Research Service, 26 January 2006), 2 and Huebert, "Renaissance in Canadian Arctic Security," 21.
8. Privy Council Office, Securing an Open Society. . . , 4. The NSP provides a lengthy list of possible threats. 08 February 2008.
9. Harriet Critchley, "The Arctic," International Journal 42, (Autumn 1987): 769; http://www.heinonline.org/HOL/PDF?handle=hein.journals/intj42&collection=journals&id=779&print=20&ext=.pdf; accessed 08 February 2008.
10. Rob Huebert, "Reinforcing Sovereignty, National Security and Circumpolar Cooperation," 7.
11. A detailed history is not the object of this paper. For further info see Kenneth Eyre, "Forty Years of Military Activity in the Canadian North, 1947-87," *Arctic* 40, no. 4 (December 1987): 291-299; Bernd Horn, "Gateway to Invasion or the Curse of Geography? The Canadian Arctic and the Question of Security, 1939-1999," in *Forging a Nation: Perspectives on the Canadian Military Experience*, ed., Bernd Horn, 307-334 (St. Catherines, Ontario: Vanwell Publishing Limited, 2002); Harriet Critchley, "The Arctic," *International Journal* 42, (Autumn 1987): 769; James Kraska, "The Law of the Sea Convention and the Northwest Passage," in *Defence Requirements for Canada's Arctic*, ed. Brian MacDonald, 8-23 (Vimy Paper 2007: Conference of Defence Associations Institute, 2007) and Jack Granatstein, *Whose War Is It? How Canada Can Survive in the Post 9/11 World*, Chapter 5.
12. Eyre, "Forty Years of Military Activity in the Canadian North, 1947-87," 294.
13. Horn, "Gateway to Invasion or the Curse of Geography? The Canadian Arctic and the Question of Security, 1939-1999," 308.
14. Kraska, "The Law of the Sea Convention and the Northwest Passage," 38 and Donald McRae, "Arctic Sovereignty? What is at Stake," Canadian Institute of International Affairs, 64, no. 1 (January 2007), 9 and United Nations. United Nations Convention on the Law of the Sea of 10 December 1982, Article 234, http://www.un.org/Depts/los/convention_agreements/convention_overview_convention.htm; accessed 8 February 2008.
15. Rob Huebert, "The Rise and Fall (and Rise?) of Canadian Arctic Security," in *Defence Requirements for Canada's Arctic*, ed. Brian MacDonald: 8-23 (Vimy Paper 2007: Conference of Defence Associations Institute, 2007): 21.
16. Arctic Council, *Impacts of A Warming Arctic-Arctic Climate Impact Assessment*, Cambridge: Cambridge University Press, 2004; 10-11; http://www.acia.uaf.edu/; accessed 13 February 2008.
17. Lauren Krugel, "China eyes Arctic riches," *thechronicleherald.ca*, 26 February 2008; http://www.thechronicleherald.ca; accessed 27 February 2008; Randy Boswell, "U.S., Canada on collision course in Arctic - Untapped resources fuel undersea land grab: U.S. expert," *The Ottawa Citizen*, 13 February 1968; http://www.canada.com; accessed 13 February 2008 and "Gold Rush under the ice Russia and the Arctic," *Economist.com/Global Agenda*, 03 August 2007; http://proquest.umi.com; accessed 04 September 2007. These are but three examples of the almost daily reports one can find on this issue.
18. Library of Parliament, *Canadian Arctic Sovereignty*, 6 and Defence R and D Canada, *Arctic Maritime Security and Defence: Canadian Northern Security Opportunities and Challenges* (Ottawa: Department of National Defence, 2005), 17-21.
19. Van Horne Institute, *Northern Information Day II – Post-Workshop Report* (Ottawa, 24 January 2005), 5; http://www.vanhorne.info/Reports/Northern; accessed 13 February 2008.
20. See Frankly Griffiths, "Pathetic Fallacy: That Canada's Arctic Sovereignty is on Thinning Ice," *Canadian Foreign Policy 11*, no 3 (Spring 2004): 1-16 and Rob Huebert, "The shipping news part II," *International Journal* 58, no. 3 (Summer 2003): 295-308. Huebert and Griffiths are the foremost academic experts in this area. Although they disagree on how soon the Arctic will be accessible to industrial scale processes, they agree that it will at some point occur and that the Government is not currently doing enough to safeguard Canadian interests.
21. Rodney Neufeld, "Arctic Sovereignty: Myths and Reality." 04 March 2008. Presentation given by Department of Foreign Affairs and International Trade lawyer to Canadian Forces College Joint Command and Staff Program 34 in Iqualuit, Nunavut and Rob Huebert, "Northern Interests and Canadian Foreign Policy," *Canadian Defence & Foreign Affairs Institute*, 2003;7-9; http://www.cdfai.org; accessed 17 January 2008. A detailed description of all territorial disputes that affect Canada in the Arctic can also be found in Defence R and D Canada, Arctic Maritime Security and Defence: *Canadian Northern Security Opportunities and Challenges*, 19-41.

22. Rob Huebert, "Northern Interests and Canadian Foreign Policy," *Canadian Defence & Foreign Affairs Institute*, 2003;7-9; http://www.cdfai.org; accessed 17 January 2008.
23. Boswell, "U.S., Canada on collision course in Arctic - Untapped resources fuel undersea land grab: U.S. expert."
24. "Gold rush under the ice: Russia and the Arctic," Economist.com.
25. Sean Maloney, "A cold war in cold waters," Maclean's Magazine, 9 January 2008; http://www.macleans.ca; accessed 21 February 2008 and Barbara Starr, "Russian bomber buzzes U.S. Aircraft carrier," CNN.com, 11 February 2008; http://www.cnn.com/2008/US/02/11/russian.bomber/; accessed 21 February 2008.
26. Lauren Krugel, "China eyes Arctic riches," thechronicleherald.ca, 26 February 2008; http://www.thechronicleherald.ca; accessed 27 February 2008 and Scott Borgerson, "Arctic Meltdown: The Economic and Security Implications of Global Warming," Foreign Affairs (March/April 2008); http://www.foreignaffairs.org/20080301faessay87206/scott-g-borgerson/arctic-meltdown.html; accessed 29 February 2008.
27. Granatstein, *Whose War Is It? How Canada Can Survive in the Post 9/11 World*, 123.
28. Bruce Campion-Smith, "NORAD facing 'rogue elements,' U.S. general says." thestar.com, 10 April 2008; http://www.thestar.com/News/Canada/article/41372; accessed 10 April 2008 and Huebert, "Northern Interests and Canadian Foreign Policy," 17.
29. Bruce Campion-Smith, "NORAD facing 'rogue elements,' U.S. general says." *thestar.com*, 10 April 2008; http://www.thestar.com/News/Canada/article/41372; accessed 10 April 2008 and Huebert, "Northern Interests and Canadian Foreign Policy," 17.
30. Neufeld, "Arctic Sovereignty: Myths and Reality," 04 March 2008.
31. Peter O'Neil, "Arctic warming could result in armed conflict: naval expert," *canada.com*, 29 February 2008; http://www.canada.com; accessed 29 February 2008 and Scott Borgerson, "Arctic Meltdown: The Economic and Security Implications of Global Warming."
32. Huebert, "Reinforcing Sovereignty National Security and Circumpolar Cooperation," 7.
33. J.D. Guerin, "'True north strong and free:' the need for a national strategy and whole of government whole of governmentwhole of governmentapproach to protect Canada's Arctic interests," (Toronto: Canadian Forces College National Security Studies Course Paper, 2006), 19.
Foreign Affairs and International Trade, The Northern Dimension to Canada's Foreign Policy; http://www.dfait-maeci.gc.ca/circumplor/ndfp_rpt-en.asp; accessed 27 August 2007.
34. Foreign Affairs and International Trade, The Northern Dimension to Canada's Foreign Policy; http://www.dfait-maeci.gc.ca/circumplor/ndfp_rpt-en.asp; accessed 27 August 2007.
35. Foreign Affairs and International Trade, *The Northern Dimension to Canada's Foreign Policy.*"
36. Privy Council Office, Securing an Open Society: Canada's National Security Policy, viii, 10, 11, 12, 41, 50-51.
37. Department of Foreign Affairs and International Trade, *Canada's International Policy Statement: A Role of Pride and Influence in the World – OVERVIEW* (Ottawa: Department of Foreign Affairs and International Trade, 2005): 8-9.
38. *Ibid.*, 8 and Department of National Defence, *Canada's International Policy Statement: A Role of Pride and Influence in the World – DEFENCE* (Ottawa: Department of National Defence, 2005): 18-19.
39. Guerin, "'True north strong and free': the need for a national strategy and whole of government approach to protect Canada's Arctic interests," 20-23. The analysis of the policies in the last two paragraphs of this essay is a synthesis of a similar, but longer, section in Colonel Guerin's NSSP paper.
40. Conservative Party of Canada, "Harper Stands Up for Arctic Sovereignty," http://www.conservative.ca/EN/1091/36512; accessed 3 September 2007.
41. Canada's New Government, "Prime Minister Stephen Harper announces new Arctic Offshore patrol ships," http://www.pm.gc.ca/eng/media.asp?id=1742; accessed 28 August 2007 and CTV.ca News, "Harper bolsters military strength in Arctic," http:www.ctv.ca/servlet/ArcticNews/story/CTVNews/20070810/Canada_denmark_arctic_070810/20070810?hub=Politics; accessed 28 August 2007.
42. The need to map the continental shelf became a legal obligation when Canada signed on to the UNCLOS treaty. The PM was clearly announcing something that Canada had already committed to doing. He grouped this previously scheduled activity with other 'new' initiatives. This paper will not speculate why the announcement was completed in this manner. *United Nations Convention on the Law of the Sea of 10 December 1982*, *Article 7 and 76*, http://www.un.org/Depts/los/convention_agreements/convention_overview_convention.htm; accessed 8 February 2008.
43. Prime Minister's Office. "Prime Minister Harper delivers on commitment to the 'New North,'" 10 March 2008; http://pm.gc.ca; accessed 13 March 2008
44. *Ibid.*
45. Foreign Affairs and International Canada, *The Northern Dimension to Canada's Foreign Policy*; http://www.dfait-maeci.gc.ca/circumplor/ndfp_rpt-en.asp; accessed 27 August 2007. This was origi-

nally published in hard format – a book. The current GoG website makes use of new technologies and displays the information in html format. However, users are able to download a pdf version of the original 2000 document - different Governments, same Arctic policy.
46. Huebert, "The Rise and Fall (and Rise?) of Canadian Arctic Security," 23.
47. Griffiths, "Pathetic Fallacy: That Canada's Arctic Sovereignty is on Thinning Ice," 1 and Nuefeld, "Arctic Sovereignty: Myths and Reality." The diagram was created by this author from the thoughts and data provided by Griffiths and Neufeld.
48. Nuefeld, "Arctic Sovereignty: Myths and Reality." Of the Arctic nations Canada has the most extensive Arctic regulatory regime, in fact other nations come to Canada for advice on how to draft and structure their laws and supporting regulations.
49. Transport Canada, *Guidelines for the Operation of Passenger Vessels in Canadian Arctic Waters*. http://www.tc.gc.ca/marinesafety/tp/tp13670/pdf-version.htm; accessed 11 April 2008, 8.
50. Andrea Charron, "The Northwest Passage Shipping Channel: Sovereignty First and Foremost and Sovereignty to the Side," Journal of Military Studies and Strategic Studies 7, no. 4 (Spring 2005). http://www.jmss.org/2005/summer/articles/charron.pdf; accessed 18 January 2008 and Thomas Axworthy, "A strong Canada in a shared continent," Toronto Star, 30 December 2007, A25. Both of these authors offer ideas designed to reach a compromise between Canada's position that the NWP constitutes territorial waters and the U.S and E.U's opinion that the NWP is an international waterway.
51. Borgerson, "Arctic Meltdown: The Economic and Security Implications of Global Warming."
52. Rob Huebert, "Canada's Arctic Security – Conference of Defence Association Institute 23rd Seminar," 15 February 2007; http://www.cda-cdai.a/seminars/2007/heubert.pdf; accessed 13 March 2008.
53. Scott Long, "A Whole of Government Approach to Canadian Arctic Sovereignty in the Face of Global Warming," Toronto: Canadian Forces College Joint Command and Staff Programme Paper, 2007 and Paul Taylor, "A hawkeyed addition to Canada's Arctic arsenal," *globeandmail.com*, 10 December 2007; http://www.globeandmail.com; accessed 11 December 2007. This author added the Canadian Space Agency entry to the list provided in Long's MDS paper.
54. Guerin, "'True north strong and free': the need for a national strategy and whole of government approach to protect Canada's Arctic interests," 47.
55. At the time of writing this paper, Canada was still awaiting the publication of the Canada First Defence Strategy. Perhaps this strategy will call for a more formalized version of a whole of government regime along the lines mentioned here
56. Guerin, "'True north strong and free': the need for a national strategy and whole of government approach to protect Canada's Arctic interests," 43-44.
57. Jan Revensbergen, "Senator slams security spending," The Montreal Gazette, 18 April 2008; http://www.canada.com; accessed 18 April 2008.
58. Guerin, "'True north strong and free': the need for a national strategy and whole of government approach to protect Canada's Arctic interests," 26.
59. Huebert, "Reinforcing Sovereignty, National Security and Circumpolar Cooperation," 8.
60. Revensbergen, "Senator slams security spending," and Taylor, "A hawkeyed addition to Canada's Arctic arsenal."
61. Gerard Kenney, "Canada should beef up Arctic rescue capabilities," *The Ottawa Citizen*, 27 November 2007, A11.
62. Fisheries and Oceans Canada, *Canadian Coast Guard Search and Rescue – Rescue Coordinating and Alerting*; http://www.ccg-gcc.gc.ca/sar/program/index_e.htm; accessed 15 March 2008.
63. Huebert, "Renaissance in Canadian Arctic Security," 22-23.
64. Granatstein, *Whose War Is It? How Canada Can Survive in the Post 9/11 World*, 110.
65. Library of Parliament, *Canadian Arctic Security*, 2.

# TELESCOPED AMMUNITION: A FUTURE LIGHTWEIGHT COMPACT AMMUNITION?

**Captain I.A. McGregor**

The concept for telescoped ammunition first came about at a US Air Force laboratory in 1954.[1] Telescoped ammunition is a form of gun ammunition in which the projectile is recessed into the main body with the propellant. While this type of round has several advantages over conventional gun ammunition, engineering challenges have so far prevented its implementation as a military ammunition. Recently, telescoped ammunition has been identified as a means of getting 30% more capability for a given size of ammunition or a 30% size reduction for the same capability.[2] More importantly, the technology is beginning to reach a usable maturity. Amongst various NATO allies, telescoped ammunition is being looked at for future medium calibre cannons through to light weight small arms ammunitions. This article examines both cased and caseless varieties of telescoped ammunition to give a better understanding of the technologies and to make recommendations on potential for use within the Canadian Land Forces.


**Figure 1: Conventional vs Telescoped[22]**

## Telescoped Ammunitions

Telescoped ammunitions have been developed for a number of reasons. When first conceived, by the US Air Force, the goal was to produce much higher muzzle velocities in comparison to conventional ammunition. Since this time there have been several examples of developmental systems employing the technology in order to increase lethality or reduce bulk and weight. Telescoped ammunition has been used in experimental small arms, such as the H&K G11 and the Styer Advanced Combat Rifle, both of which were intended to increase the lethality of infantrymen.[3] In order to improve the lethality of its jet fighters, a USAF project to develop new compact fighter cannon produced the GUA-7 25 mm cannon based on telescoped ammunition.[4] Technical challenges prevented any of these weapon systems from being fielded. The weapon system to most closely reach successful implementation with telescoped ammunition has been a United States Marine Corps effort to develop a 75 mm telescoped ammunition for its LAV-25 family of vehicles[5].

Today, it appears that telescoped ammunition has finally developed to the point where it is ready for war: Mauser has developed a family of 30 mm and 35 mm telescoped ammunition-based recoilless cannons that it is ready to market,[6] The French and British joint venture known as CTA International has developed a 40 mm telescoped ammunition and cannon that is under assessment for use on the UK Warrior Armoured Fighting Vehicle (AFV); and the United States Joint Services Small Arms Program has selected two types of telescoped ammunition for the future Lightweight Small Arms Technologies (LSAT) program.[7]

Unlike conventional ammunition, in which the projectile protrudes out the front of the round body, telescoped ammunition has the projectile fully recessed into the body of the round. Telescoped ammunition exists in two varieties: Cased Telescoped Ammunition (CTA) and Caseless Telescoped Ammunition (CLA). Both types are fully cylindrical and operate

on a system with a rotating chamber and a straight-through ejection system in which the next round pushes the previous out as it is loaded into the chamber. In order to get a better understanding of the characteristics of CTA and CLA, each will be examined individually.

## Cased Telescoped Ammunition (CTA)

CTA has been described as "conventional technology in a telescoped configuration."[8] Just like conventional ammunition; CTA consists of a casing filled with propellant which is fired through a mechanical primer at the base of the round. However, despite the label of "conventional technology," CTA does differ from traditional ammunition. In an effort to reduce weight, CTA make use of materials other than brass or steel for casing construction. Options include lighter metals such as aluminum, semi-combustible cases or polymers. These same technologies are being applied to conventional cased ammunition, but the nature of CTA allows even more material strength to be sacrificed for a reduction of mass.

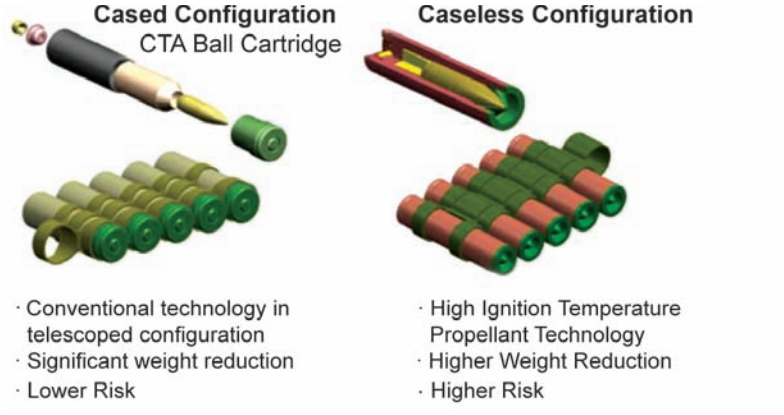



**Figure 2: US LSAT 5.56 mm machinegun ammunitions in CTA and CLA configurations[23]**

Because CTA operates by a straight-through ejection, the case does not require an extraction groove at the base and the case is perfectly cylindrical. Elimination of the extraction groove simplifies the design of all casings and, in small arms ammunition, allows for the use of materials which would lack the strength required for extraction without failure. Polymer cases for conventional ammunition require metal bases in order to survive the stresses of being used.[9] The CTA ammunition of the US LSAT program is able to employ a polymer-only case. The effect is that lightweight CTA casings can have less mass than comparable lightweight conventional cases.

While lightweight casings allow CTA to be produced with a lower mass than conventional ammunition, it is advances in propellant that allow CTA to be built smaller than conventional ammunition. One of the inventions that came from the American CTA was consolidated propellants.[10] Using this technology, designers can get a 30% volume reduction for the same number of grains of propellant.[11] Compaction of propellant grains at room temperatures only results in a limited increase in grain density and attempts to compact further will result in grain fracture and impaired ballistic performance. But, greater compaction is achieved with thermally consolidated propellants in which a thermal coating is applied to propellant grains and compaction is done while heated. In this process the melted coating acts as a lubricant and propellant grains will undergo minor deformation without fracture. When cooled, the thermally consolidated propellant retains a single rigid structure as a result of the coating. On combustion, the propellants "deconsolidate" and function as individual grains.

Two types of thermal coatings exist: energetic thermoplastics and inert coatings. Both types are rigid when cooled to temperatures at which military ammunition is stored and carried, but are liquid when heated too much higher temperatures. Inert coatings are used in

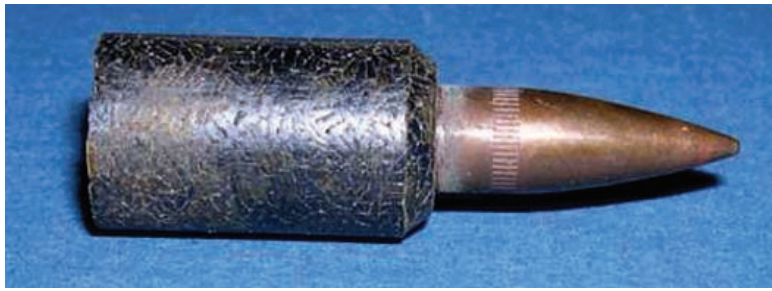


**Figure 3: 5.56 mm Consolidated Propellant Caseless Ammunition[24]**

order to delay or inhibit ignition of the propellant.[12] This can be helpful in developing two stage propellants in which some portion of the total propellant ignites at a later stage of firing. As will be seen later, this characteristic is helpful in resolving one of the challenges related to telescoped ammunition.

Despite the ability of consolidated propellants to occupy less volume, fitting both the projectile and the ammunition inside the casing has typically resulted in CTA having an increased diameter over conventional casings. One means of avoiding this increased diameter is to go with a completely caseless ammunition.

## Caseless Telescoped Ammunition (CLA)

CLA consists of a body formed of propellant, an external protective coating, a standard mechanical primer and a booster to give full ignition. CLA is distinct from other caseless ammunitions because the projectile is fully recessed into the body. Current CLA ammunition is fully cylindrical, but this has not always been the case. In 1971, NATO held a series of trials to select a new standard small arms ammunition and one of the competing options was the German G11 rifle which fired a rectangular 4.73 mm CLA ammunition. While the G11 and its ammunition failed the NATO trials, this was probably the first example of a CLA. However, development continued after the trials[13] and improved G11 ammunition became the baseline from which many modern CLA programs are building (including the US LSAT).

The leading cause of the caseless ammunition's failure at the NATO trials appears to have been "cook-offs." The technical solution to this problem was the development of an improved propellant known as High Ignition Temperature Propellant (HITP). HITP is primarily

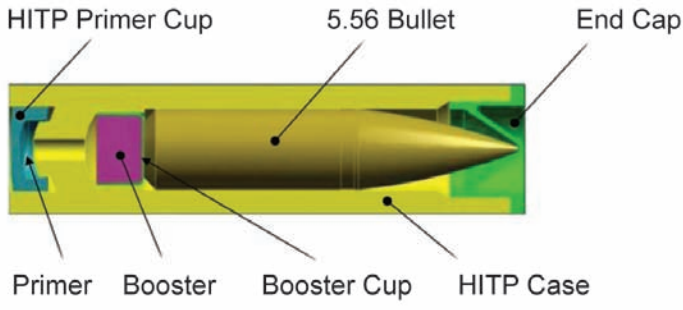



**Figure 4: 5.56 mm CLA round for US LSAT program[25]**

composed of cyclotetramethylenetetranitramine (also known as High Molecular weight RDX or HMX). The HITP is a more inert munition than nitrocellulose based propellants and so it can better stand the high chamber temperatures of a weapon that has been engaged in firing. The cost of this inertness is that CLA requires a booster charge in order to initiate the propellant. Structural integrity is enhanced by coating the formed HITP body with the same energetic thermoplastics used in the creation of consolidated propellants. The end result

is that CLA is much lighter but less durable and more complex than CTA or conventional ammunition.

## Weapon and Firing Mechanisms

The typical cylindrical shape of CTA and CLA allows for a unique chamber design and loading system. Typically, telescoped ammunition operates through a rotating chamber. A round is forced into the chamber which is then rotated in line with the barrel for firing. After firing the chamber is rotated back to the load position. Used casings or chamber debris are pushed out the front of the chamber by the next round being forced into the chamber rear. In larger AFV cannons, this method can be used to eject casings out the front of the turret and thereby eliminates the concern of handling hot casings inside of the turret.

Several mechanisms exist which create this moving chamber and straight-through eject. The G11 rifle[14] and Warrior 40 mm cannon designs are based on a chamber rotating on an axis perpendicular to the axis of the barrel. These mechanisms are shown in figures 5 and 6.

The US LSAT machinegun employs a chamber that rotates about an axis parallel to the barrel. From the load position, the chamber will rotate up to the barrel where it will lock in place to fire. On firing, the propellant gasses force the chamber to rotate back to the load position where the next round forces the casing out There is also the potential to employ multiple chambers, around an axis parallel to the barrel, for an increased rate of fire. This configuration would resemble a revolver in which one chamber is in the firing position aligned with the barrel while another chamber is in the load position. The maximum number of chambers would be limited by the size and weight available to the design. The Mauser RMK 30 mm cannon employs this multi-chamber revolver configuration.[15]

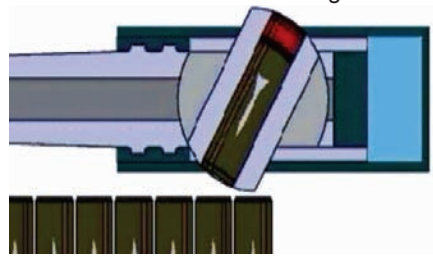


**Figure 5: Warrior 40 mm CTA mechanism[26]**

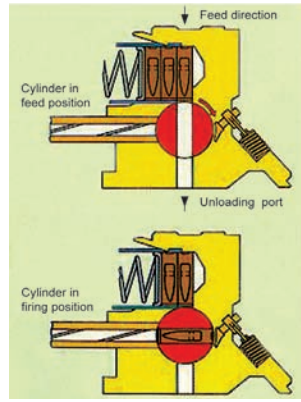



**Figure 6: G11 mechanism[27]**

While the overall principle of a rotating chamber remains the same for CTA and CLA, there is one significant difference related to the two types of ammunition. CTA provides for its own obturation at the back of the breach, but CLA does not. Therefore, the CLA weapon must include a mechanism to prevent propellant gas escaping rearward from the chamber.

The chamber sealing mechanism adds additional weight to the weapon but not necessarily to the combined weight of the weapon and ammunition.[16]

## Engineering Concerns with Telescoped Ammunition

The engineering concerns related to telescoped ammunition primarily revolve around two issues: ballistic inefficiently and high barrel erosion.

**Ballistic Inefficiency**. A 1996 US DoD report identified many of the challenges that exist with the creation of cased telescoped ammunition. The principle of these challenges was that telescoped ammunition is ballistically inefficient when compared to conventional ammunition. The inefficiency is that for any given calibre projectile, telescoped ammunition requires a greater mass of propellant in order to achieve the same muzzle velocity. This is expressed as the ratio of muzzle velocity to propellant mass.

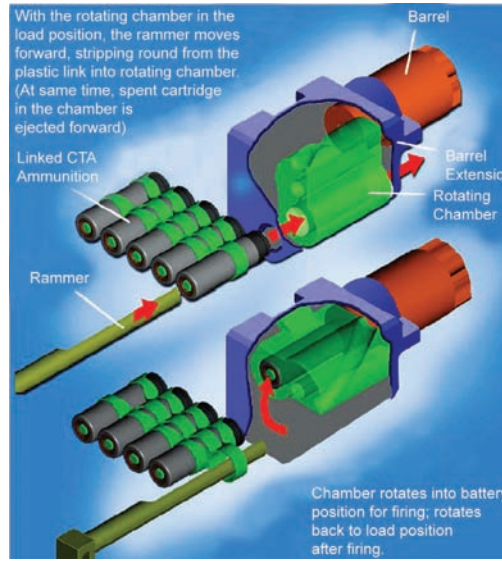



**Figure 7: US LSAT Machinegun mechanism[28]**

The principle cause of ballistic inefficiency, as identified in 1996, is gas blow-by that occurs as the projectile moves from the body of the round into the forcing cone where it achieves obturation of the barrel.[17] In order to prevent or limit gas blow-by in CTA, the projectile must move forward in near "perfect alignment with the axis of the barrel." To mitigate the effects of gas blow-by, some telescoped ammunition employs two stage propellants. The initial stage of propellant is packed entirely behind the projectile or at least entirely in the rear half of the casing. This initial stage of ignition pushes the projectile forward into the forcing cone. The second stage propellant is packed around the projectile and throughout the forward half of the casing. It is more inert and initially limits gas blow-by of the first stage propellant, then ignites as chamber pressures and temperature rise from the burning first stage propellant. It is unknown whether current generation telescoped ammunition has adopted fully effective mechanisms to improve obturation[18] around the projectile or if the increased propellant mass has been seen as an acceptable trade-off given the even greater reductions in casing mass and overall ammunition size.

**Barrel Wear and Erosion**. The increased mass of propellant used in telescoped ammunition results in greater peak pressures and greater heat generation, and this in turn transfers more heat to the weapon. At greater temperatures the barrel is more susceptible to increased barrel wear and ablation during firing. This results in significantly reduced barrel life in telescoped ammunition weapons. The solution was the development of an erosion inhibitor that is near the mouth of CTA. Erosion inhibitors consist of a paste that

coats and protects the barrel from heat and chemicals during firing.[19] Despite having been developed for CTA, erosion inhibitors have gone on to be used in conventional ammunitions such as the M919 25 mm APFSDS-T.[20] The down-side of erosion inhibitors is that they reduce muzzle velocity slightly and increase the cost of the ammunition.[21]

## Introduction of Telescoped Ammunition

Despite their engineering challenges, CTA and CLA ammunitions offer the potential for improvements over in-service conventional ammunition. However, the selection of one type of telescoped ammunition over the other will be dependant on the operational requirements of the weapon that it will be used in.

The trade-offs between the two types of telescoped ammunition are robustness and weight: the casing makes CTA more durable while the lack of a casing makes a CLA weapon system (with its ammunition) lighter. The relevance of this trade-off can be seen by comparing ammunition suitable for an AFV compared to that suitable to an aircraft. The 25 mm turret currently in Canadian service provides only limited room for ammunition. In the event that Canada decides to upgrade the cannon, telescoped ammunition would provide a means to do this within the available space. Within the vehicle, minimizing weight is less of a concern. As a result, the more robust CTA is an appropriate option for upgrading the cannon of an existing AFV. In aircraft, minimizing weight is of far greater importance and the ammunition is less likely to be exposed to rough handling. As such, CLA would be the more attractive option for an aircraft.

An additional characteristic which must be considered is the maturity of the technology. CTA uses more conventional technology and so it introduces the least risk in development of a new weapon. CLA remains the less mature of the telescoped ammunition. Therefore, CTA may be the default option when time and resources are most limited toward the development of a new weapon system. This increased risk has been recognized by the US military. The development of a LSAT machinegun has taken two parallel approaches with near identical designs being developed for both CTA and CLA guns.

**Figure 8: Cut-away of 40 mm CTA being considered for the Warrior upgrade[29]**

Despite the fact that no such ammunitions appear to have been produced for operational fielding, telescoped ammunition is a technology that is ready for introduction in operational military weapon systems. CTA and CLA both offer size and weight improvements over conventional ammunitions. CTA and CLA each come with their respective strengths and weaknesses, but this only serves to provide flexibility when selecting ammunition that meets the needs of the weapon under development.

## Endnotes


1. US DOD Document. *Evaluation Report*, *DOD Cased Telescoped Ammunition and Gun Technology Program*. Office of the Inspector General. 14 June 1996.
2. *40 mm CTWS Supporting UK and France*. 40th Annual Armament Systems Conference and Exhibition. 25-28 Apr 2005.
3. Ian V. Hogg. *The Story of the Gun*. New York: St Martins Press, 1996.
4. *Evaluation Report, DOD Cased Telescoped Ammunition and Gun Technology Program*.
5. Ibid.
6. Janes.com "Mauser RMK 30 30 mm automatic cannon." Jane's Armour And Artillery Upgrades. 23 Mar 2006.
7. Spiegel Kori and Paul Shipley. *Lightweight Small Arms Technologies*. Presentation to the Joint

Services Small Arms Systems Annual Symposium. May 2005.
8. Spiegel, Kori and Paul Shipley. *Lightweight Small Arms Technologies*. 25th Army Science Conference. Nov 2006.
9. Malckovich, Nick and Robert Gangé. *Lightweight Ammunition: A Material Science Challenge*. Presentation to the Joint Services Small Arms Systems Annual Symposium. May 17, 2005.
10. Evaluation Report, DOD Cased Telescoped Ammunition and Gun Technology Program.
11. Cloutier, Todd and Lucian Sadowski. *Development of a Lightweight Ammunition Concept Using an Alternative Case Material and Enhanced Propellant*. Picatinny NJ: ARDEC, May 2005.
12. Ibid.
13. Ian V. Hogg.
14. Ian V. Hogg.
15. Janes.com "Mauser RMK 30 mm automatic cannon." Jane's Armour And Artillery Upgrades. 23 Mar 2006.
16. Spiegel, Kori and Paul Shipley. *Lightweight Small Arms Technologies. 25th Army Science Conference*. Orlando Fl. Nov 2006.
17. *Evaluation Report, DOD Cased Telescoped Ammunition and Gun Technology Program*.
18. Mechanical Solutions Inc. Website. *Evaluating Cased Telescoped Ammunition*. http://www.mechsol.com/html/ch/chmilitary.html, Accessed, 1 Feb 2007.
19. Veritay Technology Website. *Gun Barrel Erosion Inhibitor*. http://www.veritay.com/defense/def_ei.htm, accessed 1 Feb 2007.
20. GlobalSecurity.org. *M919 Cartridge 25mm, Armor Piercing, Fin Stabilized, Discarding Sabot, with Tracer* (APFSDS-T). http://www.globalsecurity.org/military/systems/munitions/m919.htm, accessed 3 Feb 2007.
21. *Evaluation Report*, *DOD Cased Telescoped Ammunition and Gun Technology Program.*

## Figure Endnotes

*22.* 40 mm CTWS Supporting UK and France. 40th Annual Armament Systems Conference and Exhibition. 25-28 Apr 2005.
23. Spiegel, Kori and Paul Shipley. Lightweight Small Arms Technologies. 25th Army Science Conference. Nov 2006.
24. Veritay Technology Website. Consolidated Propellant Technology. http://www.veritay.com/defense/def_consol.htm. 01 Feb 2007.
25. O'Reilly, Patricia M.. Caseless Ammunition. Presentation to Euro Insensitive Munitions & Energetic Materials Symposium. Bristol, UK. Apr 2006.
26. 40 mm CTWS Supporting UK and France. 40th Annual Armament Systems Conference and Exhibition. 25-28 Apr 2005.
27. HKPRO World Website. The G11, Far Ahead of Its Time. http://www.hkpro.com/g11.htm, accessed 3 Feb 2007.
28. Spiegel, Kori and Paul Shipley. Lightweight Small Arms Technologies. Presentation to the Joint Services Small Arms Systems Annual Symposium. May 2005.
29. 40 mm CTWS Supporting UK and France. 40th Annual Armament Systems Conference and Exhibition. 25-28 Apr 2005.

# THE LEGACY OF MAJOR-GENERAL JAMES WOLFE: BATTLEFIELD LEADERSHIP AND THE DEFEAT OF THE FRENCH EMPIRE IN NORTH AMERICA

**Chris Graham**

**Major-General James Wolfe**

The Seven Years' War (1756-1763) involved most of the larger European powers, but was fought in several theatres far away from Europe. Of these remote regions, North America was the only one to have large-scale campaigns fought across its expanse. While the British forces here were initially less than successful, they begin to see substantial gains in their battles against the French after the arrival of Major-General James Wolfe. Born to a comfortable, though by no means rich, household in Westerham, England, Wolfe grew up with a desire to become a soldier.[1] He joined the British army as an ensign and quickly rose through the ranks, participating in the War of Austrian Succession (1740-1748) and the Seven Years' War.[2] It was at the failed amphibious assault at Rocherfort, France in 1757 that Wolfe distinguished himself, being found by an inquiry to have been one of the few officers from the expedition to have attempted to carry out the attack.[3] This event led him to be selected as one of the commanders for the expedition to North America charged with the capture of Louisbourg.[4] After this victory, the next target became the city of Quebec. The battle that made the capture of Quebec possible was the Plains of Abraham, where Wolfe's leadership and creativity were the reasons for the triumph of the British forces. It was at this pivotal battle that Wolfe displayed his strength as a leader. This success, in addition to the capture of the French fortress of Louisbourg, caused the elimination of France from North America. Wolfe's excellence as a commander brought victory on both occasions; however, the significance of his involvement is most effectively illustrated in the defeat of the French at the Plains of Abraham. British success at this battle on 13 September 1759 was the result of Wolfe's effective command abilities, which involved his battlefield leadership; proficiency at raising morale amongst his troops; and the various tactical innovations that he had his soldiers employ.

After suffering several initial defeats, the British finally seized the initiative in the war at the Siege of Louisbourg.[5] This was the first of Wolfe's great North American victories and was of immense importance, since the fortress of Louisbourg was a major source of French pride and strength. Its capture gave the British access to the St. Lawrence River, which would allow them into the heart of North America.[6] The credit for this victory lies exclusively with Wolfe, as it was he who commanded the initial landing and successfully formed a beachhead by reversing his order to retreat and instead having his soldiers support a tenuous hold on the shore.[7] He then led British preparations for the attack: erecting batteries, destroying the French defenders' Island Battery and edging the British siege works closer and closer to the fortress.[8] Had it not been for Wolfe, Louisbourg may have taken much longer to capture, or it may not have fallen at all. While

Wolfe's leadership and battlefield influence made this victory possible, the Plains of Abraham is an even better illustration of how his command skills enabled the British to triumph.

The battle of the Plains of Abraham was the British victory that preceded the Siege of Quebec. It was this encounter that irreparably damaged the French resistance in North America. After several failed attempts to take Quebec over the course of the season, a successful attack was launched in the early hours of 13 September 1759.[9] The British forces, packed into their boats, went along the St. Lawrence River and landed successfully above Quebec at Anse-du-Foulon.[10] There were to be multiple landings, as the boats could not hold Wolfe's entire force at once.[11] While the main attack force was landing upriver of Quebec at Anse-du-Foulon, the British fleet and the soldiers who had remained behind engaged in a diversionary attack at Quebec that successfully drew the attention of General Montcalm to a possible landing below the French city.[12] Additional feints saw a French scouting force of 2,000 men under Bougainville "drawn up river towards Pointe-aux-Trembles... [and] the Quebec garrison occupied by a heavy bombardment from the Levis batteries."[13] These tactics allowed Wolfe's main attack force to land initially unopposed. To ensure his plan was carried out correctly, and because of his desire to be at the head of his army, Wolfe was with the first British division that landed.[14] The immediate obstacle to overcome after reaching the shore was scaling the heights. The only way to the top was to "[climb] a hill, or rather, a precipice of about three hundred yards—very steep, and covered with wood and brush."[15] The British soldiers "gained the top of the hill, without any remarkable opposition."[16] Once the first wave of soldiers had reached the top, however, it quickly became apparent that it was necessary to stop the French Samos Battery, which had begun to bombard the second wave of Redcoats. "A party was sent to silence it; this was soon effected, and the more distant battery at Sillery [upriver of Samos] was next attacked and taken."[17] The British force, roughly 4,800 strong, assembled atop the Plains of Abraham.[18] Due to the large battlefield and the small number of soldiers, Wolfe deployed his men in a formation two ranks deep, as opposed to the usual three.[19]

By eight o'clock Wolfe's army, now complemented by a single six-pound artillery piece, was ready and awaiting the opposition.[20] The French, under Montcalm, were taken by surprise and "slow to react to the British landing. [By] around 9:30 a.m., Montcalm [had formed] his force of 4,500 into three columns, each six ranks deep."[21] Numerically, the armies were of similar size, but while the French forces contained a large portion of militia, Wolfe commanded an army composed entirely of regulars.[22] This gave Wolfe a tactical advantage, as all of his men were experienced, disciplined, professional soldiers. When the French charged at the British lines, Wolfe's soldiers held their fire. Wolfe had his "Redcoats [wait] until the French had advanced to within 40 yards [as well as] load their muskets with an extra ball. Montcalm's columns wilted in the face of such massed firepower."[23] This simultaneous and more precise musket fire crippled the French line and crushed the survivors' will to fight. The French forces quickly turned and retreated to Quebec, while Montcalm was mortally wounded in the process.[24] The British were quick to pursue the vanquished French. As the enemy fled, Wolfe, who had earlier been shot in the wrist, led the charge of the Louisbourg grenadiers and was hit for a second time.[25] He continued to move forward until, "struck by a third ball, and this time in the breast, his face towards Quebec, he fell."[26] Though a large portion of the retreating French troops were able to escape, victory could still be claimed as Quebec was surrendered to the British on 18 September 1759.[27] Although the French were not yet defeated, this signaled the end of their empire in North America.

Wolfe's battlefield leadership was a very important contributing factor in his victory over the French at the Plains of Abraham. It was his command of the army that placed the British soldiers in the best possible position for the battle, and delivered a decisive blow to the French forces. While waiting for the French to assemble, Wolfe made sure to situate his army where it would have the most protection from the French batteries at Quebec. This was achieved by arraying the British forces behind a ridge that ran across the Plains of Abraham.[28] Wolfe's decision not to take the high ground saved many British lives and may have affected the outcome of the battle. Steven Brumwell notes that Wolfe's deployment exploited "the shelter of the low-lying 'dead ground' behind [the ridge, which] screened his men from the direct fire of the city's guns,"[29] adding that if the British had assembled atop the high ground "they would have become sitting targets."[30] Though many commanding officers may have acted differently, assuming that seizing the high ground is always the best plan, Wolfe's direct control over his army and excellent tactical

skill allowed him to ensure that the British force was not weakened through attrition by the artillery located at Quebec.

Another excellent example of how Wolfe's influence on the battlefield directly contributed to the British victory was his strict order not to fire until the enemy was within optimal range. Captain John Knox recorded that Wolfe made it clear that his soldiers were not to fire "until [the French] came within forty yards. [This] uncommon steadiness threw [the French] into some disorder, and was most critically maintained by a well-timed, regular, and heavy discharge of our small arms."[31] By waiting for the French to come within forty yards, Wolfe ensured that his army would deal Montcalm's forces one swift, catastrophic blow. Wolfe was directly involved with the implementation of this order, as he walked along the ranks of his army ensuring that every man understood his order to hold their fire until the French were at point-blank range.[32] This decision and its careful execution paid off for Wolfe as it severely damaged the French army.

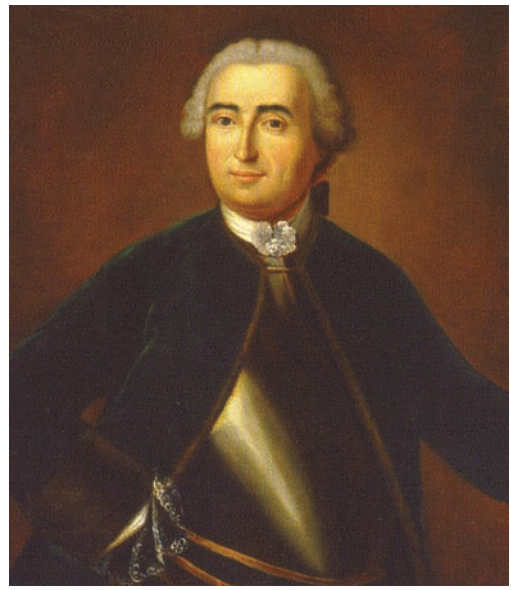
Wolfe demonstrated his excellent leadership right up until the moment of his death. He continued to issue orders even after he had been shot for a third time and forced to the ground. It was at this point, when the French retreat had begun, that Wolfe ordered "go one of you, my lads, to Colonel Burton, tell him to march Webb's regiment with all speed down to Charles' river, to cut off the retreat of the fugitives from the bridge."[33] Though these orders were not carried out in the confusion of the battle, it would be safe to assume that if they had been, the French retreat would have been seriously undermined and a far higher French casualty and capture rate would have been witnessed.[34] This again goes to show how Wolfe's orders had a profound impact on the battle. His decision not to occupy the high ground, and to reserve the British fire until the French were within optimal range show the way in which his command was vital to the British victory at the Plains of Abraham, while Wolfe's final orders illustrate how total the British success could have been had he continued to lead.

An army's morale and the soldiers' confidence in their leader can often determine the outcome of a battle. Troops will fight harder and with more determination where these factors are present. Wolfe's actions inspired his men at the Plains of Abraham and helped make the British victory possible. He was always at the forefront of his men, only sending them where he would go himself, and he consistently demonstrated genuine concern for their well-being. Wolfe boosted the morale of his army by being at its head. He was not to be found behind the lines, issuing orders from safe ground; he was at the front with his men, "[walking] about, heedless of enemy fire."[35] By showing that he was not afraid, Wolfe was effectively leading by example and inspiring his soldiers. The great respect that the soldiers had for their leader meant his presence at the front increased the force's fighting potential. "Wolfe walked along the front line… uttering words of encouragement, assurance, and command. The effect of the presence and words of their idol was electrical, and the red-coats fell into ranks and shouldered their muskets."[36] Wolfe's ability to arouse his soldiers' will to fight, but also keep them disciplined and orderly, were due in part to his inspirational presence. A leader who lacked the support and trust of the men would be unable to energize his troops in the same fashion. Wolfe's leadership and his presence at the front line had an incalculable, though unquestionably positive effect on the British army and victory.

Aside from respecting Wolfe for his various military achievements, the men liked him because they knew he cared for them. He demonstrated this on several occasions, including two on the battlefield at the Plains of Abraham. In the first instance, "a captain [who had been] shot through the lungs [recovered] consciousness [to see] the General standing at his side. Wolfe pressed his hand, told him not to despair, praised his services, [and] promised him early promotion."[37] Wolfe was very committed to his soldiers, and because they knew this, they trusted the orders he issued and were willing to follow him wherever he led. Wolfe also showed that he cared for his men as, while awaiting the French advance, he had his troops lie down on the ground to avoid being hit by sniper fire.[38] While this obviously had a tactical aspect to it as well, it shows that Wolfe was thinking about the safety of his men. By maintaining a presence at the front of the army, leading his troops in battle, and caring for the British soldiers both on an individual and collective level, Wolfe won the respect and loyalty of the men he commanded. These factors enabled him to increase his army's morale and inspire the British Redcoats to fight as hard as they could.

Wolfe's tactical ingenuity and innovation as components of his command provide two concrete examples that directly contributed to his victory at the Plains of Abraham. Climbing

the heights to reach the Plains of Abraham was a dangerous gamble, but placed Wolfe's forces in a position that threatened Quebec, and ordering his troops to load two shots into their muskets felled scores of French troops. Both of these approaches greatly increased the likelihood of a British victory. The most famous aspect of the battle of the Plains of Abraham is the daring nighttime climb up the heights to the battlefield. The heights themselves were "a formidable obstacle, no less than 175 feet high. Although not perpendicular, [they] looked daunting enough."[39] Having all of his troops quickly and quietly surmount the heights and take possession of the Plains of Abraham was the necessary action that enabled the battle outside of Quebec. Without this unique plan, the attack would never have occurred, since up to this point the British had been unable to infiltrate the French defenses around Quebec. The French were shocked by the British actions: "General [Wolfe] had his army on the [enemy's] shore, within two miles of the town, before his arrival was well known at their headquarters."[40] Wolfe's army now threatened Quebec and forced Montcalm to fight a decisive battle. Scaling the heights not only enabled the battle to occur, but it also strengthened the British position, as an open field allowed the professional Redcoats to fight in the kind of battle for which they had trained and in which they had experience.[41] Had it not been for Wolfe's ingenious method of avoiding the heavily fortified areas around Quebec, a successful British landing and eventual victory would not have been possible.



**Lieutenant General Louis-Joseph, Marquis de Montcalm**

Where Wolfe's climb had made the battle possible, his orders to enhance the strength of the initial British attack helped ensure victory. The return fire that the British discharged when the French came within 40 yards crushed the opposition, but it was not solely because of the close range. Wolfe made this strike even more decisive by instructing his soldiers to load their muskets with two shots.[42] This tactic practically doubled the effectiveness of the attack and caused "nearly every man in the French front rank [to go] down."[43] The innovations that Wolfe implemented in his plans to take Quebec were very important in the defeat of the French. The climbing of the heights allowed the British to surprise the French and engage in battle with them, and the use of a double-shot round caused immense destruction to the French front line. Credit for both of these ideas is due to Wolfe's intelligent and innovative command.

The battle of the Plains of Abraham illustrates what an effective leader Wolfe was, and how his actions and presence were central to the British victory outside of Quebec in 1759. This success forced the French inside the walls of Quebec and subjected it to a full siege. The city fell soon after, which immensely damaged the French hold on the continent. It was this victory that laid the groundwork for the wholly British North America that was soon to be born. The engagements fought under Wolfe's command, particularly the Plains of Abraham, demonstrate how influential his orders and ideas were to the British victories in North America. Wolfe's leadership in the battle resulted in the best possible positioning of the British forces, which negated the artillery from Quebec that the French would otherwise have used. His commands also ensured that the French forces were defeated at the start of the battle by concentrating his army's firepower into one devastating volley. Wolfe's inspirational and caring nature, as seen from his place at the head of the army, and the order for the troops to lie down, created an enthusiasm among the British soldiers to fight harder and trust the orders given. Finally, the unconventional tactics he utilized, such as climbing the Heights of Abraham, and having his soldiers load two shots in their muskets enabled the battle to occur and strengthened the British attack. As commander, Wolfe greatly enhanced the British prospects of victory at the Plains of Abraham. When examining this battle, it is hard to imagine that such an event would have been won, or even occurred, if not for Major-General James Wolfe's leadership.

## About the Author ...

Chris Graham of Scarborough, Ontario has completed his Bachelor of Arts Honours at Queen's University with a medial in history and politics as of spring 2009. In his time at university, he has pursued his interest in Canadian and British military history, as it has been the focus of much of his writing. Members of his family have served with the Canadian Forces in the Second World War, First World War, and the Boer War. He has accepted an offer to enroll in law school in September 2009.

## Endnotes

1. W.T. Waugh, *James Wolfe, Man and Soldier* (Montreal: Louis Carrier and Co., 1928), 24-26.
2. Waugh, 61-63.
3. F.E. Whitton, *Wolfe and North America* (Boston: Little, Brown, and Company, 1929), 203.
4. Francis Parkman, *Montcalm and Wolfe* (Boston: Little, Brown, and Company, 1884), 48.
5. Stephen Brumwell, *Paths of Glory: The Life and Death of General James Wolfe* (Kingston: Queens University Press, 2006), 158.
6. Mitchell MacNaylor, "The Battle of Quebec The Day France Lost North America," *Military History*, Vol. 24, No. 6 (September 2007): 58.
7. Waugh, 160.
8. Whitton, 214.
9. Penelope Johnson, "Defending Quebec," *History Today*, Vol. 51, No. 8 (August 2001): 5.
10. Whitton, 272.
11. Parkman, 288.
12. Parkman 282
13. William Wood, *The Fight for Canada: a Sketch from the History of the Great Imperial War* (Toronto: The Musson Book Company Limited, 1906), 219.
14. Brumwell, 275.
15. Malcolm Fraser, "A Manuscript Journal Relating to the Operations Before Quebec From 8th May, 1759 to 17th May, 1760," in Ian McCulloch, *Sons of the Mountains: The Highland Regiments in the French and Indian War, 1756-1767 Volume One* (Toronto: Robin Brass Studio, 2006), 187.
16. Rear-Admiral Charles Holmes to unknown, 18 September 1759 (Special Collections Archives: University of Waterloo), 3.
17. Parkman, 288.
18. Ian MuCulloch, "With Wolfe at Quebec," *Beaver*, Vol. 72, No. 2 (April/May 1992): 22.
19. Waugh, 289.
20. Sydney Robjohns, "The Siege of Quebec," *Transactions of the Royal Historical Society*, Vol. 5 (1877): 165.
21. MacNaylor, 60.
22. Brumwell, 280.
23. MacNaylor, 60.
24. Holmes, 5.
25. Robjohns, 166.
26. Robjohns, 167.
27. Parkman, 315.
28. Wood, 234.
29. Brumwell, 279.
30. Brumwell, 279.
31. Captain John Knox, *An Historical Journal of the Campaigns in North America for the Years 1757, 1758, 1759, and 1760*, ed. Arthur G. Doughty (Toronto: The Champlain Society, 1914), 101.
32. Wood, 237.
33. Knox, 114.
34. Brumwell, 288.
35. Harrison Bird, *Battle for a Continent* (New York: Oxford University Press, 1965), 300.
36. Robjohns 166.
37. Parkman, 294.
38. Bird, 300.
39. Brumwell, 274.
40. Holmes, 4.
41. Brumwell, 280.
42. Knox, 101.
43. Waugh, 295.

# BIOGRAPHY—LIEUTENANT HERBERT WESLEY MCBRIDE, MM

**Sergeant K. Grant, CD**

The border between the United States and Canada has for centuries now seen the ebb and flow of people in times of strife. United Empire Loyalists, the Underground Railroad, soldiers and deserters all crossed the border at one time or another as they ran toward, or away from, their political beliefs.

**Herbert W. McBaine**
**Captain, 21st Battalion, CEF**

In the spring of 1915 a strapping young man from Indiana named Herbert Wesley McBride made his way north to Ottawa in a bid to get into the "great show." Although his career path was a bumpy one, McBride would demonstrate his ability as a soldier by earning the Military Medal for gallantry and secure his legacy in the world of marksmanship by writing two books, The *Emma Gees, and A Rifleman Went to War*,that have had a profound influence on army marksmanship programs around the world right up to the present day.

Herbert Wesley McBride was born on October 15, 1873 in Waterloo, Indiana, to a family with a strong military and outdoor background. His grandfather served in the Mexican War and his father in the Union Cavalry. Following the Civil War, McBride's father went on to become a lawyer and a judge on the State Supreme Court, and rose to the rank of Colonel in the Indiana State Guard. Herbert followed in his father's footsteps and at the age of fifteen joined the State Guard, but problems with tuberculosis forced him to move to the Colorado-New Mexico region on the advice of doctors. It was while in the west that he brushed shoulders with many frontiersmen who had settled the region and gained valuable advice about practical shooting and survival.

Upon his return to Indiana he rejoined the State Guard and was eventually promoted to Sergeant. Later he joined one of the State Artillery Batteries that was equipped with the Gatling gun and it is here that he received his indoctrination into the use of the weapon. Later, like his father and grandfather before him, he too would become a lawyer.

In 1898 the Klondike Gold Rush fired the imagination of thousands and McBride, now 25, armed with his knowledge of the bush headed north to the gold fields. But two years is a long time for anyone to spend under arduous conditions and in 1900 he'd had enough. Ever the opportunist, though, "on my way out I had the opportunity to help gather up a bunch of recruits for the Strathcona Horse, just then being mobilized for service in South Africa. I had hoped to go with them, but at the time, the regulations were such that none but British subjects were eligible. That was in 1900 and I came back to Indianapolis and again hitched up with my old outfit—Company D, 2nd Infantry." By 1907 he had risen to the rank of Captain.

The company commander was a man to his liking and reinforced McBride's belief that shooting was the most important skill that a soldier could learn. "Every man in his company had to qualify as at least a marksman during the first year or get out. In the second year, if he could not make sharpshooter, he also took the gate, and after three years, if he did not rate expert, he

**The Military Medal**

was no longer eligible for re-enlistment." McBride was serious enough about his shooting that he went on to compete each year from 1900 to 1911 at the National Matches as a member of the State team.

In 1911 however he was off again, this time to British Columbia where he ostensibly worked in railway construction, but the real reason was "to get out somewhere so that I could shoot a rifle without having to spend a couple of months and all my money building a backstop." Working on the railroad suited McBride perfectly and he took every opportunity to hunt and fish the virgin territory being slowly opened up by the expanding track. But in March of 1914 word reached him of an impending war with Mexico and McBride saw his chance to finally get into action. He immediately returned home where he rejoined the State Guard and was assigned to Company H, 2nd Infantry at his former rank of Captain.

While waiting for a war that wasn't to be, news arrived of the outbreak of war in Europe. The desire to get involved was strong in McBride and as he puts it "there was a war on and I did not intend to miss it." As a commissioned officer in the State Guard, McBride gambled that the Canadian Army would accept his services, so he resigned his commission and again headed north. His gamble paid off and he was granted a commission in the 43rd Regiment (Duke of Cornwall's Own Rifles) in Ottawa.

But getting overseas wasn't quite so straight forward. At the time there was a ruling in place that officers selected for service in the Canadian Expeditionary Force must come from the Active Militia. Though he was not a Canadian citizen, McBride was recommended for a commission as Lieutenant in the 43rd based on his past service. Now a member of the Active Militia, he was quickly appointed to the 38th Battalion C.E.F. with the rank of Captain and the recommendation that "in view of the previous experience that Captain McBride has had in musketry, his services be utilized in connection with the instruction of musketry in the 38th Battalion C.E.F."

By mid-February McBride had been transferred from the 38th to the 21st Battalion in Kingston in the role of Musketry Instructor. But with his dream of going to war within reach, the first storm clouds of what would be a recurring issue of alcohol abuse began to appear as documented in this private letter in March 1915 from Lt.-Colonel William St. Pierre Hughes to his older brother Sam:

> *"Will you please have Capt. McBride recalled to Ottawa. He is drinking very heavily and I do not care to take him in hand. He will, I am sure, do better in Ottawa…"*

The utility of having an elder brother who was the Minister of Militia and Defence was effectively demonstrated when a day later McBride was immediate recalled to duty with the 38th Battalion. He reported to Ottawa, but was disheartened to learn that the 38th was slated for deployment to Bermuda for garrison duty. Accounts of the events of the week following this news are somewhat fuzzy and more than one version exists. In *A Rifleman*, McBride puts a gallant spin on the events and in his own words "I went out and tried to drink all the whiskey in Ottawa and made such an ass of myself that the higher-ups were glad to get rid of me." The official report, however, is far more colourful, as recorded by his O.C.:

> *"At noon on Wednesday the 17th instant, Captain H.W. McBride dressed in uniform and wearing a Stetson hat became intoxicated. Later in the afternoon he procured a horse and for the better part of an hour, gave an exhibition of his qualities in horsemanship on the main street of Ottawa [now Sparks Street], and at one time was performing for about two hundred people in front of the Russell Hotel…"*

During the week it appears there was at least one face-to-face with his O.C., copious amounts of drinking, a written request by the 38th for him to resign his commission and, at McBride's request, a private audience with Sam Hughes during which McBride essentially fell on his sword and admitted he acted badly and understood why he was being asked to resign his commission. To his credit, McBride could have return to the United States and that would have been the end of it, but instead he requested permission "to serve in the ranks in another battalion going to the front at an early date." His request was granted and on April 3rd, 1915 Herbert McBride arrived in Kingston and enlisted in the 21st Battalion as a private and it was off to England.

In June of 1915, while the 21st was training in England, McBride transferred to the machine gun section, and it appears that drinking again became a problem. His record shows that in July and September he was reduced to half pay for drinking incidents while attached to the Headquarters Sub-staff of the 2nd Division. For a time—and likely as punishment for his indiscretions—he remained attached to the H.Q. staff while the 21st went to the continent; not until October would he leave for France to rejoin the unit.

While he was at the front there were no more drinking incidents and in February 1916 he was promoted to Sergeant. McBride was finally in a position to indulge himself in the combat he had always yearned for and it was this period that his books were based on. That McBride was a capable soldier has never been in doubt, as witnessed by his commander Lt.-Col. (later Brig. Gen) W.S. Hughes: "McBride was outstanding as a fighting man, fearless, untiring, [and had] a genius for invention... with an army of such men it would be an easy matter to win against any troops." The hunting skills learned during his years in the bush served him well and he developed a knack for sneaking out into no man's land at night to monitor and harass the enemy. As he puts it "the technique is quite simple. Just wait until the enemy is quiet, slip over, bomb 'em a little, hop into their trench, grab off a few prisoners and any machine guns you happen to see and beat it back home," and for the entire time he was in the trenches "he was constantly seeking authority to damage the enemy." His abilities were quickly recognized and on June 5th 1916, he was awarded the Military Medal for his actions in the face of the enemy. In part, his citation reads as follows:

> *"For exceptional courage and devotion to duty in connection with scouting and patrol work. In December of 1915 he twice visited the enemy parapet and upon one occasion brought back a small flag, which had been affixed with wires to a can of explosive. He has on several occasions gathered valuable information from enemy conversations overheard."*

Later that month, on 21 June, McBride was again granted his commission as an officer, at which time he was returned to England to await official commissioning and posting to a new unit. It is quite probable that McBride's time on the front had a profound psychological impact on him. At 43 he was no longer a young man, and it is likely that the death of William Bouchard, a young French Canadian from Aylmer, Quebec he had taken under his wing, had a profound impact on him. In his first book, the Emma Gees, he writes "but I knew right down in my heart that my nerves were weakening. Thinking over some of the things we had done, I believe I could never do them again." Years after the war he would again reflect upon his time in the trenches and in his second book, *A Rifleman Went to War*, he writes, "I found I was weakening, not that I allowed anyone else to see it, but right down in my heart I felt that the game was over, so far as I was concerned." The prospect of returning to the horrors of the front was likely more than he could take and the drinking incidents started again when he returned to France with the 18th Battalion.

Perhaps having fulfilled his desire to get into the fighting and having witnessed the real face of combat, he felt he had seen enough to last him a lifetime. On August 2nd, 1916 Captain McBride was transferred to the 18th Battalion and trouble soon followed. Just after his arrival at battalion he was told to report to the front, instead, he went on an A.W.O.L. drinking binge only to resurface days later in an intoxicated state. The result was a Court Martial facing three charges. Here his legal training stood him in good stead and for five torturous days he tied the lesser trained legal officers in procedural and jurisdictional knots that ultimately won him an acquittal. Elated with his legal victory McBride went on a celebratory binge and two days later was again brought before a Court Martial on charges of drunkenness. This time his ability to manipulate the proceedings failed him and the court sentenced him to a severe reprimand.

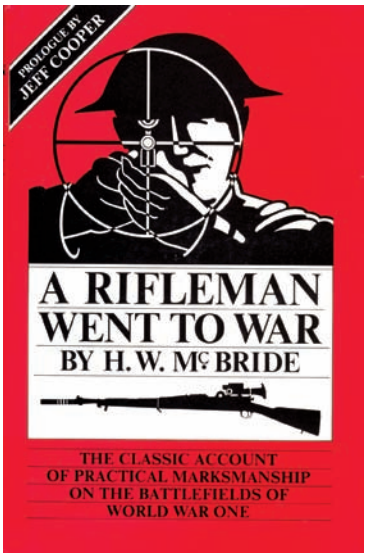
The final straw however came in October of 1916 when, after having been placed in command of a mule convoy bringing supplies up to the forward trenches, he abandoned his charge and was arrested having been found in a drunken state. Captain Herbert Wesley McBride was subsequently Court Martialed and in February 1917 was "Dismissed from His Majesty's Service."

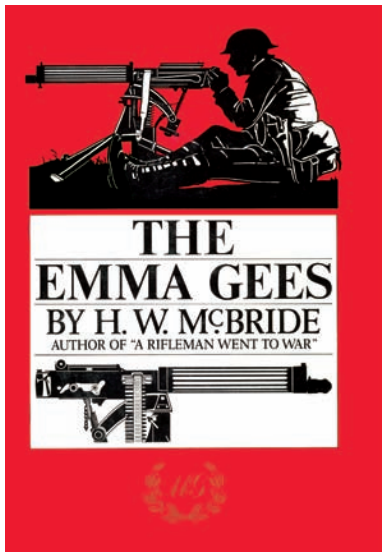
Here again, McBride could have returned home and left the service for good, but his sense of duty got the better of him. Following his departure from the C.E.F., McBride returned to the United States and became a marksmanship and sniping instructor with the U.S. Army's 38th Division, serving out the war in Camp Perry. Nearly two years later, in October of 1918, he resigned

from the U.S army and spent his remaining years in the Oregon lumber industry. On March 17th 1933, Herbert Wes McBride, MM, passed away unexpectedly of heart failure at his home in Indianapolis. He was sixty years old.

While McBride's career was both colourful and tragic and full of notable subterfuge, it is in his writing that we find his lasting contribution to the military. The *Emma Gees*, first published in 1918, was McBride's first book and focuses on his service with the machinegun section during the war. Uniquely, it is the first book to be published about the application of the machine gun during war. Alternating between a poetic and direct style, his writing encapsulates the thinking of the period, but it is second book, published two years after his death, which has grown to the status of legend amongst the shooting fraternity.

*A Rifleman Went to War* covers everything from military training, life in the trenches, the anatomy of trench raids, hand-to-hand combat and the use of the pistol. His thoughts on "the pistol in war" played a key role the development of Jeff Cooper's "Modern Techniques of the pistol" and McBride's discussion of the "neatest and handiest military rifle I have ever seen" provided the basis for Cooper's concept of the "Scout Rifle." Cooper, who has been recognized as the father of what is commonly known as the "modern technique" of handgun shooting, and is considered by many to be one of the 20th century's foremost international experts on the use and history of small arms, himself points out in the introduction to a later reprint of *A Rifleman*, "as a young marine I read McBride carefully and enthusiastically, and I learned more about my business from his work than from any other single source. I hope it is not true that I got *all* my ideas about fighting from him... but I certainly got a lot of them."




It is interesting to note that despite the passage of time, the introduction of new weapons and weapon systems, and the seemingly endless list of tasks the modern infanteer must perform, the fundamental truths of the need for physical fitness and marksmanship training remain the same today as when McBride wrote about them; so much so that, McBride's writing on the matter were seminal in the development of U.S. military sniping doctrine in the Second World War, Korea, Vietnam and on to the present day. Indeed, the U.S. Marine Corps Sniper School has made *A Rifleman* mandatory reading for its would-be snipers. "His books are not just a history of World War One, but a fact filled thesis on the use of rifle, pistol and machinegun in combat. The chapters on sniping and machine gunnery are classics and by themselves make this book worth one's while to read. Yet this is only part of the book's value; McBride's insights about the practicalities of surviving and winning the infantry battle are true gems, and are well worth the attention of infantrymen at every level." Any serious student of marksmanship would do well to have both these books in their collection.

# NOTE TO FILE—A COMPARISON OF THE INFORMATION OPERATIONS DOCTRINE OF CANADA, THE UNITED STATES, THE UNITED KINGDOM, AND NATO

**Neil Chuka**

Information operations (Info Ops) doctrine has probably produced more disagreement and confusion amongst the nations of the ABCA Armies' Standardization Program (American, British, Canadian, Australian, and New Zealand), academics, and the media, than any other military doctrine subject (save, perhaps, for counter-insurgency doctrine). The confusion and disagreement has run along a number of lines: that the doctrine was overly techno-centric; that key terminology was poorly defined; that the doctrine was too conceptual in nature and poorly grounded; that the doctrine was too vague to enable personnel to employ it in the field.[1] All of these criticisms have a basis of truth. However, since the publication of the first Info Ops doctrine by the United States (US) Army in 1996, great improvements have been made, and it appears that in the near future there will be a joint, international Info Ops doctrine that reconciles national lexicons, concepts, and philosophical approaches to the subject in the form of NATO Allied Joint Publication (AJP) 3.10.[2]

It has been a painful, lengthy process to produce AJP-3.10 though, taking many years and numerous drafts (six or seven in total by this author's count) and reflective of the type of change occurring to the Info Ops doctrine of the US Army, the Canadian Army, and in the United Kingdom (UK). In the US, the Army had made great strides in improving its Info Ops doctrine as part of a rewrite of its basic Operations manual, FM 3.0, successfully shedding the vague and techno-centric nature of earlier versions. In the UK, new conceptual thinking has led to reconsideration of the stance adopted by the Army and Joint level doctrine writers. This has caused a complete reworking of the Info Ops construct. The new conceptual stance has made it very difficult to reconcile with new allied doctrine. In Canada, the Army has new Info Ops / Influence Activities doctrine as part of recently published *Land Operations* and *Counter-insurgency Operations* manuals. The material in these manuals remains in line with the November 2007 draft version of AJP-3.10.

This article argues that although the Info Ops doctrine of the US Army, Canada, the UK, and NATO has in general improved through the absorption of lessons from operations over the past decade and stronger conceptual thinking on the subject, the topic of Info Ops continues to generate much debate and some confusion. That being said, it is possible, to a degree, to reconcile the new and emergent national doctrines and that of NATO. This article will provide a brief overview and comparison of the Info Ops doctrine of the Canadian, American, and British Armies, and NATO. It begins with an overview of the Canadian Army's new Info Ops doctrine and then compares the US Army's, the UK's, and NATO's new doctrine to it. The intent is to highlight the similarities and differences between each nation. The goal is to provide enough insight that the reader may be able to understand the doctrinal basis for Info Ops in a coalition environment.

## Canada

Currently, the Canadian Forces (CF) possesses no up-to-date, joint-level Info Ops doctrine. At the joint level, some units continue to refer to the 1998 CF Info Ops manual, despite the fact that it is now several generations out of date. The Army has up-to-date Info Ops doctrine published as part of new *Land Operations*[3] (Land Ops) and *Counter-insurgency Operations*[4] (COIN) doctrine. There is no intent to publish a stand-alone Info Ops manual at the Army level. For the most part, the Army's new Info Ops doctrine closely follows the draft NATO Info Ops manual, AJP-3.10[5]. Because the Army has the only up-to-date Info Ops doctrine in Canada, its doctrine will be used as the basis of comparison throughout this note.

All Canadian Army doctrine is predicated on adherence to the philosophical constructs of the effects-based approach, comprehensive approach, manoeuvrist approach, and mission command. The effects-based approach to operations simply implies that the all tactical and operational level activities should be considered for primary, secondary, and if

possible, third-order effects so that unintended effects are minimized or avoided all together and that all activities should be linked to the desired strategic end state.[6]

The comprehensive approach implies "the deliberate use and orchestration of the full range of available capabilities and activities to realize desired effects."[7] This includes the full range of national capabilities, meaning the "fires" capabilities of the military element, and the "influence" capabilities of the military and civilian elements of a Canadian mission. The comprehensive approach is based upon a joint military approach, cooperation, and to the greatest extent possible, coordination with other government agencies and departments and non-governmental organizations, normally in a multinational, coalition environment. Both the effects-based approach and the comprehensive approach are viewed as philosophical constructs vice systems approaches, meaning that the concepts are simply meant to shape thinking rather than provide some type of scientific system for planning.

The manoeuvrist approach is another key philosophic construct and is most succinctly defined by capstone British doctrine:

> *The manoeuvrist approach to operations applies strength against identified vulnerabilities, involving predominantly indirect ways and means of targeting the conceptual and moral component of an opponent's fighting power. Significant features are momentum, tempo and agility which, in combination, aim to achieve shock and surprise.*[8]

Manoeuvre, a term used most often by elements of the US armed forces, is the application of manoeuvrist thinking to war fighting.[9]

This approach seeks to apply friendly strengths against adversary weakness, in combination with maintenance of momentum and rapid tempo to induce shock and surprise. "It calls for an attitude of mind in which doing the unexpected and seeking originality is combined with a ruthless determination to succeed."[10] The manoeuvrist approach does not eschew physical destruction of the enemy, but seeks to achieve the desired ends of a campaign in the most effective manner possible.

Finally, mission command is defined as "the philosophy of command that promotes unity of effort, the duty and authority to act, and initiative to subordinate commanders."[11] Mission command is an essential supporting element to the other philosophical constructs discussed above because it is meant to provide initiative and authority to subordinates to act, predicated on a clear understanding of both the incremental and ultimate goals of a campaign and mission and of the intent of commanders at all levels.

It should also be noted that Canadian Army doctrine recognizes only physical and psychological planes.[12] The doctrine argues that activities create effects on both of these planes, but the order of the effects and the primary desired effect will differ dependent upon context and aim. Thus, offensive fires may seek to destroy an enemy's physical capability as a first-order and primary desired effect, with secondary effects on his will to continue the fight. On the other hand, the construction of a well for fresh water and improvements in sanitation may be the first order effect of the activity, but the secondary effect, improved relations with coalition forces, is the primary desired effect. In both cases, effects were created on the physical and psychological planes, but the primary desired effects differed. The latter instance is an example of an *influence activity*.

With the understanding of these basic philosophical constructs, we can turn to the discussion of Canadian Army Info Ops doctrine.

The Army defines *information operations* as:

> *Coordinated actions to create desired effects on the will, understanding, and capability of adversaries, potential adversaries and other approved parties in support of overall objectives by affecting their information, information based processes and systems while exploiting and protecting one's own.*[13]

Info Ops, as a coordinating function, is applicable across all campaign themes, from stability operations to high intensity warfare. However, the primary capabilities employed in a given campaign theme will differ, depending upon the context and operational

requirements. Army doctrine has accepted three core activity areas for Info Ops: influence activity (IA), counter-command activity (CCA), and information protection activity (IPA).[14] As can be seen in Figure 1, CCA and IP activities are considered to be on the physical plane while Influence Activities are on the psychological plane.

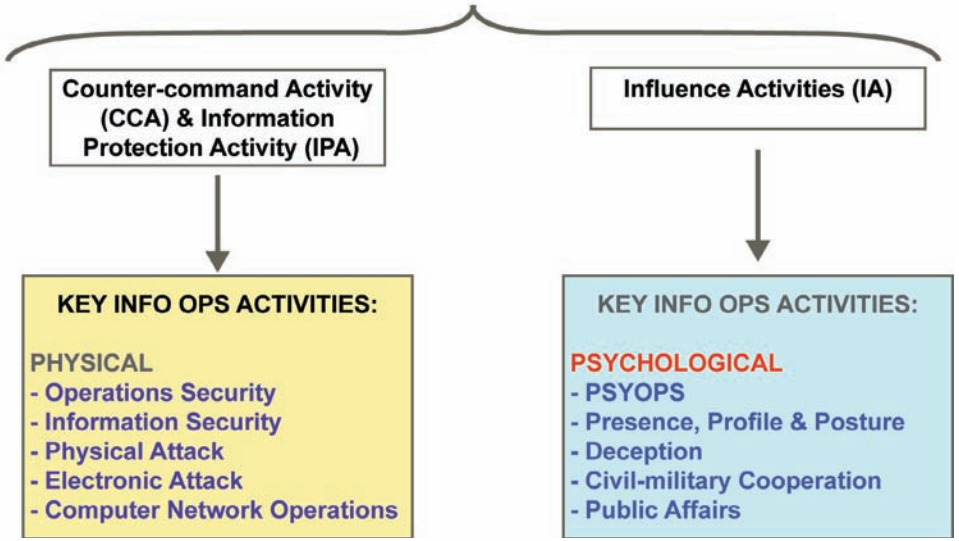



**Figure 1: Canadian Army Core Activity Areas[15]**

CCA and IPA are essentially offensive and defensive actions that seek to create first order effects on the physical plane. Simply put, CCA affects the capability of the target, IPA affects the target's understanding, and Influence Activities affect the target's will.[16] IA seeks to create primary desired effects on the psychological plane, and as such, focus of Info Ops during Stability and Counter-insurgency campaigns. Since publication of the Canadian Army *Land Ops* and *COIN* manuals, some discussion has taken place about reclassifying deception, which was always only meant to reflect deception undertaken to deceive an enemy, from the "influence" category to the "counter-command" category. This would be to remove any misconception that deception activities would be conducted to deceive non-military target audiences.

The Army *COIN* manual defines IA as "an activity designed to affect the character or behaviour of a person or a group as a first order effect…it affects understanding, perceptions, and will, with the aim of affecting behaviour in a desired manner."[17] The primary capabilities of the IA area are psychological operations (PSYOPS), public affairs (PA), civil-military cooperation (CIMIC), presence, posture and profile (PPP), and (military) deception. Which capabilities are employed to achieve the desired effects on the target audience will depend upon what the aims are, the context, and the target audience. Canadian doctrine and practice maintains clear distinctions between PSYOPS and PA, but holds that the activities of both must be integrated and synchronized.[18]

To conclude the discussion of Canadian Army Info Ops doctrine, the key elements to remember are the philosophical constructs of the effects-based approach to operations, the comprehensive approach, manoeuvrist approach, and mission command, and the division of Info Ops activities into the three core activity areas of influence activity, counter-command activity, and information protection activity. Because the intent of this note is simply to present a comparative overview, the reader should refer to the noted sections of the Army's Land Ops and COIN manuals for more detailed information.

## The United States

The US has both Joint and Army Info Ops doctrine. The joint level has Joint Publication (JP) 3-13 *Information Operations* (February 2006), while the US Army does not currently

have stand-alone Info Ops doctrine. However, the Army has an updated Info Ops chapter in the newest edition of FM 3-0 *Operations*, their capstone land operations manual.[19] In order to keep the length of this note brief, and because most Canadian military personnel deploying on current coalition operations will be interacting with US Army personnel, this section will primarily focus on the material contained in FM 3-0 *Operations*.

The US Army employs philosophical approaches to their doctrine similar to Canada; however, there are a few differences that require noting. While they do not use the effects-based approach terminology, they do predicate operations on the consideration of first, second, and third order effects of activities. Rather than "Comprehensive Approach" they use "Unified Action." The US Army does not employ the term "manoeuvrist approach," preferring to employ "manoeuvre" in a somewhat ambiguous manner that can allow for interpretation along the same lines as manoeuvrist approach. However, this ambiguity leaves extrapolation and interpretation of manoeuvre subject to the personality of the reader. Mission command is employed and defined in a manner that, for all intents and purposes, is identical to the Canadian Army.

The US Army has dropped the term "Information Operations" and now titles the doctrinal subject "Information Superiority." There are a number of reasons why the term is no longer in use by the US Army, but the discussion of these reasons is not especially pertinent to the aim and scope of this article.

*Information superiority* is defined as:

> *The operational advantage derived from the ability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary's ability to do the same.*[20]

One of the major criticisms of earlier generations of US Army and Joint Info Ops doctrine was that the term Information Operations was so broad as to be largely meaningless, and that the description of what capabilities and activities required coordination was confusing, the US Army developed the concept of "Information Tasks" that seek to group activities (or intended effects) and capabilities into broad categories (Figure 2). The intent is to "integrate information tasks into all operations and include them in the operations [planning] process from inception."[21] In essence, the categorization of activities is meant to make it easier for commanders and personnel to conceive of how to match desired ends with operational activities and the intended effects required to achieve the goal of a mission. In this, the development of the five information tasks is no different than the categorization of activities in the Canadian Army doctrine.

| Task | Intended Effects | Command and Control | Information Protection | Operations Security | Military Deception |
|---|---|---|---|---|---|
| **Intended Effects** | Inform and educated internal and external audiences<br><br>Influence the behaviour of target audiences | Degrade, disrupt, destroy, and exploit enemy command and control | Protect vital intelligence on friendly forces to hostile collection | Deny vital intelligence on friendly forces to hostile collection | Confuse enemy decision makers |
| **Capabilities** | Leader and soldier engagement<br><br>Public Affairs<br><br>Psychological operations<br><br>Combat camera<br><br>Strategic communi-cation and Defence support to public diplomacy | Physical attack<br><br>Electronic attack<br><br>Electronic warfare support<br><br>Computer network attack<br><br>Computer network exploitation | Information assurance<br><br>Computer network defence<br><br>Electronic protection | Operations security<br><br>Physical Security<br><br>Counter-intelligence | Military deception |

**Figure 2: US Army Information Tasks[22]**

As can be seen from Figure 2, the five groupings of "Information Tasks" are information engagement, command and control warfare, information protection, operations security, and military deception. The five groupings can be roughly aligned with the three core activity areas in Canadian Info Ops doctrine (Figure 3). Command and control warfare and military deception is roughly equivalent to counter-command activity; information protection and operations security (OPSEC), combined, is roughly equivalent to information protection activity; while information engagement is roughly equivalent to influence activity.

| CDN Army Activity Group | | US Army Equivalent |
|---|---|---|
| Influence activity | = | Information engagement |
| Counter-command activity | = | Command and control warfare and military deception |
| Information protection activity | = | Operations security, and information protection |

**Figure 3: Canadian Army and US Army Activity Categorization Equivalencies**

*Information engagement* is defined as:

> *The integrated employment of public affairs to inform U.S. and friendly audiences; psychological operations, combat camera, U.S. Government strategic communication and defense support to public diplomacy, and other means necessary to influence foreign audiences; and, leader, and Soldier engagements to support both efforts.*[23]

While the wording of the definition for information engagement is dissimilar to Canada's definition of influence activity, the intent is essentially the same: *to affect the behaviour of the target audience so that a desired or preferred course of behaviour is adopted*. The only exception to this rule is with the role of PA, which, although it undeniably influences audiences by the ways and means in which information is presented, there is no primary intent to influence the behaviour of an audience. Rather, the intent is to inform.

The exclusion of military deception from information engagement, the specification that PA is meant to influence domestic audiences alone, and that PSYOPS is meant to solely influence foreign audiences is made to satisfy US legal restrictions codified in law. Although in practice Canada follows the same idea, there are no codified legal restrictions in Canadian statutes. Also, "Leader and Soldier engagement" is roughly equivalent to "Presence, Posture, Profile" in Canadian doctrine.

Finally, Canadian personnel involved in coalition operations with the US may hear the term "Information Environment." Defined by the joint level as "the aggregate of individuals, organizations, and systems that collect, process, disseminate, or act on information,"[24] the US Department of Defense considers the information environment as an operational plane along with psychological and physical. Because of the ambiguity and lack of consensus amongst doctrinal communities on the definition of the term, neither the US nor Canadian armies continue to employ it, although the US joint level and the US Air Force does. That, plus the length of time it has been in use (over twelve years), means that personnel are likely to encounter the term on coalition operations. In Canadian doctrine, the elements of the information environment are subsumed in either the physical or psychological planes.

The current construct of US Army Information Superiority doctrine is much more compatible with new Canadian Army doctrine than previous iterations. Although much of the terminology differs, the intent is the same, and it is fairly easy to reconcile the US lexicon with that employed in new Canadian doctrine. Readers are encouraged to refer to Chapter 7 of the newest edition (2008) of FM 3-0 for more detail.

## The United Kingdom

The UK's Info Ops doctrine is currently being re-written. Previous UK joint doctrine, Joint Warfare Publication (JWP) 3-80 *Information Operations* (June 2002),[25] was used to inform the creation of both NATO AJP-3.10 and Canadian Army doctrine. JWP 3-80 introduced

the activity categories eventually promulgated in NATO AJP-3.10 and in Canadian doctrine. Indeed, the fundamentals of JWP 3-80 were also used in ABCA Information Operations syndicates. However, sometime during the end of 2007 and the Spring of 2008, the UK scrapped the concepts put forth in JWP 3-80 and set about to rewrite the military's Info Ops doctrine. While the reasons for this are beyond the scope of this article, it is important to note that the new concepts being used to rewrite the doctrine are a complete break from the previous version, and are somewhat difficult to reconcile with either US, Canadian, or NATO material.

Despite the proposed changes to UK Info Ops doctrine, the philosophical foundations of UK doctrine remain unchanged and are identical to those employed by the Canadian Army. Thus, the effects-based approach, manoeuvrist approach, comprehensive approach, and mission command are employed in an identical manner as in Canadian doctrine.[26]

Info Ops doctrine, however, is a completely different matter. Information on how the UK plans to reorganize the Information Operations construct is limited at this point although it appears that it will employ the structure below:

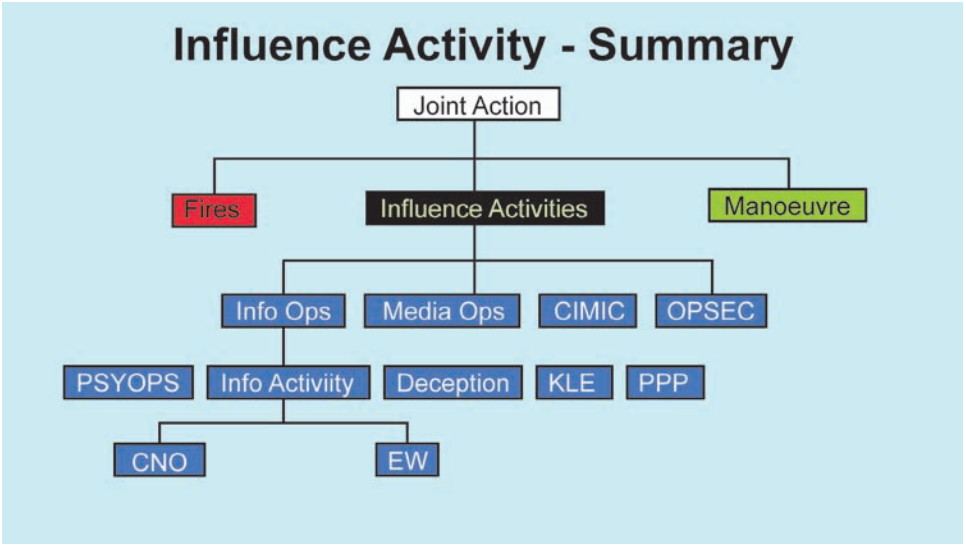



**Figure 4: Proposed UK Reorganization of Information Operations Doctrine. Abbreviations: Info = information; CIMIC = civil-military cooperation; OPSEC = operations security; PSYOPS = psychological operations; KLE = key leader engagement; PPP = presence, posture and profile; CNO = computer network operations; and EW = electronic warfare.**

As can be seen from Figure 4, taken from a presentation to the ABCA Agile Alliance Influence Activities Syndicate in Shrivenham in June 2008, "Joint Action," defined as "the deliberate use and orchestration of the full range of available military capabilities and activities to realise effects,"[27] is the overarching military construct. Joint action sits below the concept of "Comprehensive Approach." "Fires" and "Manoeuvre" straddle "Influence Activities" as supporting activities. "Manoeuvre" is defined as "coordinated activity necessary to gain advantage within a situation in time and space"[28] and therefore remains the application of manoeuvrist thinking to war fighting. "Fires," defined as "the deliberate use of physical means to support the realisation of, primarily, physical effects,"[29] in essence remains the use of ordnance to influence enemy thinking (i.e. demonstration fires) or degrade his capabilities. The term "Influence Activities" is defined as "the capability, or perceived capacity to affect the character or behaviour of someone or something."[30] It is this last definition that constitutes the major change to UK doctrinal thinking. Thus, the key change is one of terminology and organization that breaks from the previous categorization of activities in JWP 3-80.

Influence activities sits in a position formerly occupied by Info Ops. Info Ops now comprises the purely military activities of PSYOPS, "Info Activity" (equivalent to counter-command activity), deception, key leader engagement (KLE), and presence, posture, and profile (PPP). This new construct thus excludes media ops (PA equivalent), CIMIC, and OPSEC, all of which are arrayed as supporting capabilities alongside Info Ops. The division of capabilities in this manner isolates Info Ops to solely those things that will be used by the military against a military opponent (state-based or irregular), and provides for an organizational separation for CIMIC and media ops, which are capabilities that, in the case of media ops, are not intended to influence as a first-order effect, and CIMIC, which can be used to assist neutral and friendly parties. Essentially, whereas Canadian doctrine sees influence activities as part of Info Ops writ large, the UK is replacing what Canada calls Info Ops with "Influence Activities" and places greater emphasis on media ops, CIMIC, and OPSEC as enablers rather than activities under the Info Ops rubric.

All this being said, Figure 4 is conceptual in nature and not published doctrine. Until formally published, it will prove difficult to properly reconcile their new construct with allied doctrines. However, information suggests that this construct has already been employed operationally by the British military.

## NATO

NATO Info Ops doctrine has been many years in development and it appears it is finally approaching ratification. The most current version is entitled Allied Joint Publication 3.10 (AJP-3.10) *Allied Joint Doctrine for Information Operations*, Ratification Draft 1, and dates from late 2008.[31]

Reflective of the amount of variance in the Info Ops / Influence Activities doctrine of Canada, the US, and the UK discussed above, the AJP 3.10 draft has changed from the relatively straight-forward definition and categorization of activities that were adopted for Canadian doctrine to something less definitive and lengthier. AJP-3.10 now has two related definitions, one for Info Ops, and the other for "Information Activities." Info Ops are now defined as:

> *A military function to provide advice and coordination of military information activities in order to create desired effects on the will, understanding and capability of adversaries and other NAC [North Atlantic Council] approved parties in support of Alliance mission objectives.*[32]

"Information Activities" are now defined as "actions designed to affect information and information systems. They can be performed by any actor and include protective measures."[33]

Information activities are purely military activities with PA as a supporting capability under Info Ops. Conceptually, this is not at odds with the statutory or policy limitations guiding the use of PA (or media ops) in the US, UK, or Canada. Combined, the NATO definitions of Info Ops and information activities are essentially equivalent to the Canadian Army definition for Info Ops and do not present any conceptual difficulties for reconciling the different doctrines.

The other difference of this latest version of AJP-3.10 from Canadian Army doctrine is that the category titles of Influence Activities, Information Protection Activities, and Counter-command Activities have been removed, although the definitions remain very close to those used in the Canadian Army manuals for those categories. Although not named (the Canadian title is in brackets), the NATO definitions for influence activities, information protection activities, and counter-command activities, in order, are:[34]

- Influence Activities—Information activities that focus on changing, influencing, or reinforcing perceptions and attitudes of adversaries and other NAC approved parties.

- Information Protection Activities—Information activities that focus on preserv-

ing and protecting Alliance freedom of manoeuvre in the information environment by defending the data and information that supports Alliance decision-makers and decision-making process.

- Counter-command Activities—Information activities that focus on countering command functions and capabilities by affecting the data and information that supports adversaries and other NAC approved parties, and are used in command and control, intelligence, surveillance and target acquisition, and weapon systems.

All other components of AJP-3.10 are identical with the basic features of US, UK, and Canadian doctrine. The philosophical basis for the doctrine is closely related to those of Canada, the US, and UK. Also, the key capabilities and tools that comprise the Info Ops concept include PSYOPS, PPP, OPSEC, information security, military deception, EW, physical destruction, KLE, CNO, and CIMIC.[35] PA is, as noted above, a separate but related function that must be coordinated at all times with alliance Info Ops.[36]

## Conclusion

Despite different terminology and organization, broad, mutual understanding of Info Ops and influence activities concepts exists between the NATO, the US, UK, and Canadian armies. Differences in terminology, lexicon, and organization exist, but careful reading of the relevant doctrine, which must include, in some cases, higher level capstone doctrine, can help avoid potential misunderstandings or confusion. The basic common understanding between the allies is that Info Ops and influence activities are command-driven, that they are a coordinating function, and that they are essential to operations in the contemporary operating environment. That being said, there will continue to be some confusion and disagreement as the doctrine continues to change. This must be expected given the fact that the UK's new conceptual stance is not published doctrine and the fact that none of the doctrine compared here is identical. Variations in lexicon, conceptual thinking, and policy, sometimes even within the various levels of a nation's armed forces, means that it will likely be many more years before general consonance in national approaches to the Info Ops doctrinal construct is achieved.

The goal of this brief comparative note has been to provide enough insight that the reader may be able to understand the doctrinal basis for operations in a coalition environment by highlighting the similarities and differences between the Army Info Ops doctrine of Canada, the US, UK and NATO. It is therefore a limited discussion. For a deeper understanding, this note can be used to guide the reader through a closer reading of the material referenced herein.

## About the Author ...

Neil Chuka is a Defence Scientist—Strategic Analyst with Defence Research and Development Canada, Centre for Operational Research and Analysis. Prior to being hired by DRDC CORA, he worked as a contractor at the Directorate of Army Doctrine on land operations, counter-insurgency and information operations doctrine. His Master's thesis is a comparative analysis of ABCA-nation Information Operations doctrine.

## Endnotes

1. A full discussion of these criticisms is beyond the scope of this article. For a comprehensive discussion of the historiography of Info Ops doctrine and the criticisms levied by various commentators, see the author's "Confusion and Disagreement: the Information Operations Doctrine of the United States, The United Kingdom, Australia, Canada, and NATO," unpublished Master's Thesis, Kingston: Royal Military College of Canada, October 2007. In particular, Chapters One and Two. A portable document format (PDF) version is available upon request to the author.
2. Some of the information presented in this article is a result of the author's involvement in the

development of Canadian Army doctrine and ABCA project teams and working groups, first as a contractor and now as a Defence Scientist - Strategic Analyst with Defence Research and Development Canada Centre for Operational Research and Analysis. All the information presented is unclassified.
3. Canadian Department of National Defence, B-GL-300-001/FP-000 *Land Operations* (Kingston: Army Publishing Office, 2008). See Chapter 5, Section 9. Hereafter, referred to as "Land Ops."
4. Canadian Department of National Defence, B-GL-323-004/FP-003 *Counter-insurgency Operations* (Kingston: Army Publishing Office, 2009). See Chapter 8. Hereafter, referred to as "COIN."
5. NATO Allied Joint Publication (AJP) 3.10 *Allied Joint Doctrine for Information Operations*, is now in the final stages of the ratification process.
6. *Land Ops*, Chapter 5, Section 4, 5-21.
7. *Land Ops*, Chapter 1, 1-12.
8. United Kingdom Ministry of Defence, Joint Warfare Publication 0-01 *British Defence Doctrine*, 3rd ed., (Shrivenham: Joint Doctrine and Concepts Centre, August 2008), 5-7.
9. United Kingdom Ministry of Defence, Joint Warfare Publication 0-01 *British Defence Doctrine*, 2nd ed., (Shrivenham: Joint Doctrine and Concepts Centre, October 2001), 3-5. See also *Land Ops*, Chapter 5, Section 10.
10. *British Defence Doctrine* (2008), 5-7.
11. *Land Ops*, Chapter 5, Section 11, 5-84.
12. The psychological plane has in the past been termed the "moral" plane. The change in terminology was spurred by the desire to address definitional confusion and came as a result of widespread consultation with various parties, including Defence Scientists from Defence Research and Development Canada's Toronto laboratory, specifically Dr. Carol McCann and Dr. Keith Stewart.
13. *Land Ops*, 5-47. This definition was adapted from the November 2007 draft of NATO AJP-3.10.
14. *Land Ops*, 5-48.
15. Adapted from *Land Ops*, 5-55, Figure 5-14.
16. This is not meant to say that activities in all of the activity areas may not also affect one of the other elements of the target's abilities. In general though, the first order effects are in line with the manner illustrated.
17. *COIN*, 8-1.
18. *COIN*, 8-2.
19. US Department of the Army, FM 3-0 *Operations* (Washington, DC: US Department of Defense, February 2008).
20. FM 3-0 Operations (2008), 7-1.
21. Ibid., 7-2.
22. Adapted from FM 3-0 Operations (2008), 7-3, Table 7-1.
23. Ibid.
24. US Department of Defense, *Joint Publication* 3-13 *Information Operations* (Washington DC: US Department of Defense, February 2006), I-1.
25. United Kingdom Ministry of Defence, Joint Warfare Publication 3-80 *Information Operations* (Shrivenham: Joint Doctrine and Concepts Centre, June 2002).
26. *British Defence Doctrine* (August 2008), 1-8 to 1-10, 4-11, 5-3, 5-7.
27. UK Ministry of Defence, Joint Discussion Note 1/07, *Joint Action* (Shrivenham: Development, Concepts and Doctrine Centre, February 2007), 1.
28. *British Defence Doctrine* (August 2008), 5-6, fn. 4.
29. Ibid., fn. 2.
30. Ibid., fn. 3.
31. NATO, AJP-3.10 *Allied Joint Doctrine for Information Operations*, Ratification Draft 1, (Brussels: NATO, 2008).
32. AJP-3.10 Ratification Draft 1, 1-3. North Atlantic Council (NAC) approved parties are defined as "those identified in top-level political guidance on Alliance information activities. These may include adversaries, potential adversaries, decision-makers, cultural groups, elements of the international community and others who may be informed by Alliance information activities."
33. Ibid.
34. AJP-3.10 Ratification Draft 1, 1-7.
35. Ibid., 1-8 to 1-12.
36. Ibid., 1-13.

**Painting—Major-General J.H. Roberts, CB, DSO MC, CD (1891-1962)**
**Lawren Phillips Harris**
**Major-General J.H. Roberts, DSO, MC**
**CWM 19710261-3102**
**Beaverbrook Collection of War Art**
**© Canadian War Museum**

Major-General John Hamilton "Ham" Roberts was born in the southwestern Manitoba village of Pipestone on 21 December 1891. Educated at Toronto's Upper Canada College and at the Royal Military College in Kingston, he proved a robust and active student, excelling in sports, particularly football, tennis, shooting and cricket. Upon graduation in 1914 he accepted a commission in the Royal Canadian Artillery and subsequently served with the Canadian Expeditionary Force during the First World War. In 1915 he arrived in Flanders and in 1916, while fighting at the Somme he won the Military Cross for gallantry. In 1918 he was wounded and removed to England to recover and served out the war as an artillery instructor.

Between the wars, Roberts remained active in the Permanent Force as a gunnery instructor. When the Second World War started Roberts was a Lieutenant-Colonel and deployed to Northern France with the 1st Field Brigade of the 1st Canadian Division. This unit was later reorganized into the 1st Field Regiment, RCHA and deployed to France. In what became known as the Battle of France, Robert's regiment was ordered back to England in a hasty retreat. On the beaches of Dunkirk, Roberts was the only commander in the allied forces to withdraw with all his guns. In the confusion he also returned with 12 Bofors, seven predictors, three Bren gun carriers and a number of technical vehicles.

A month later In England he was promoted Brigadier and was appointed commander of the Royal Artillery, 1st Canadian Division. A year later he was appointed Corps Commander, Royal Artillery, 1st Canadian Corps, and in April 1942 was promoted Major-General and assumed command of the 2nd Canadian Division.

In August 1942, MGen Roberts was appointed the commander of Operation JUBILEE, which has since become known as the Dieppe Raid. Though he had no part in the planning, he knew that his refusal to accept the appointment would only result in someone else taking his place, and so did his best to make the raid work. From his command post aboard the HMS Calpe, Roberts was under constant heavy fire with only sketchy reports being sent back from the shore. It was only when the troops were recalled to their transports that Roberts began understood how desperate the situation was: almost none of the objectives had been captured and two brigades out of three had been destroyed.

Though he was never officially blamed for the failure of the raid—indeed, he was awarded the Distinguished Service Order and the Croix de Guerre with Palm for his efforts—his removal from command would come in March the next year when he was severely criticized for his tactical weaknesses during Operation SPARTAN, in preparation for the D-Day landings.

A decorated and highly competent officer, MGen Roberts refused to blame others or even speak about the Dieppe Raid, accepting instead to take the whole burden upon his shoulders until the day he died. Major-General Roberts Died at his home in Jersey, the Channel Islands on 17 December 1962.

**About the artist**—The son of Group of Seven artist Lawren S. Harris, Lawren P. Harris trained in Boston at the Museum School of Fine arts and was encouraged to become an official war artist by the Canadian High Commissioner to Great Britain, Vincent Massey. Harris served with the Governor General's Horse Guards (3rd Canadian Armoured Reconnaissance Regiment) during the first three years of the Second World War. As a war artist he remained with them in Italy as part of the 5th Armoured division during 1944.

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# — BOOK REVIEWS —

## EFFECTS-BASED APPROACHES TO OPERATIONS: CANADIAN PERSPECTIVES

Edited by ENGLISH, Alan and COOMBS, Howard. Ottawa: Department of National Defence, 2008, paperback, 102 pages, ISBN 978-1100106274

**Lieutenant-Colonel P.J. Williams, CD**


Having previously served as an "effects guy" in previous lives, it was with some interest, tinged with a degree of "here we go again," that I decided to review this book. The effects-based approach to operations (EBAO) is a relatively new concept for the CF, and in many ways we're still wrestling with its implications, both in operations and in our doctrinal processes at home.

A similar wrestling match, or more correctly a two-day workshop, co-sponsored by Defence Research and Development Canada (DRDC) and the Canadian Forces Aerospace Warfare Centre (CFAWC), took place in November 2006, to identify the issues surrounding Effects-Based Operations (EBO). Specifically, workshop participants from across the CF were charged with addressing six questions:

- What is an "effect" in the context of EBO?
- What is EBO in a Canadian context?
- What are the linkages between EBO, and Networked Enabled Operations, network-centric warfare and Operational Art?
- How might EBO affect future force employment?
- How might EBO affect future force development?
- How might EBO affect future force generation?

The book is logically divided into several parts which provide an introduction to the work; a historical perspective of EBO; a summary of the views of workshop participants (this is the real heart of the book); with the last two parts offering post-workshop views of EBAO by various contributors from both the academic community and from staff members at the Canadian Forces College; and finally concluding material including an annotated bibliography on EBAO and draft Army doctrine on the subject. The entire work is available on both the Internet and Intranet at respective CFAWC websites.

The authors claim that EBO has its roots in US Air Force doctrine from past wars, it suffered a decline in the post-Vietnam era, when the "fighter community" held increasing sway and that it achieved a sort of resurrection in the first Gulf War. At that time the resurgence of EBO was largely due to the efforts of Col John Warden, who was tasked to develop the air campaign for that war. Conversely, in US naval circles at least, EBAO was shunned as being incompatible with "naval requirements for swift and decisive tactical engagement."

A similar degree of scepticism is quite evident in some of the articles written by workshop participants-with titles such as "Don't Drink the Kool-Aid…" and "Putting Lipstick on a Pig", leaving very little doubt in the reader's mind what these contributors think. Others take a differing view, stating that in an era where a "Whole of Government" approach to operations, in which non-military factors must be increasingly taken into account, EBAO has highly relevant application. Indeed, one contributor believes that a degree of EBAO should be taught down to the senior NCO level. Thus, while not all workshop participants came to full agreement on EBAO, they did note that

there is no generally agreed approach to EBO or EBAO within the CF.

If it is any consolation, others have been wrestling with this as well: while working at HQ RC(S) with Allied colleagues, the United Kingdoms Helmand Task Force staff, took the view that EBAO was nothing special or distinct in itself; rather, it was a normal part of doing business. Indeed, our US colleagues have taken a similar view, to the point where the Commander of US Joint Forces Command issued determined in August 2008 that , "I am convinced that the various interpretations of EBO have caused confusion throughout the joint force and amongst our multinational partners that we must correct. Therefore, we must return to time-honored principles and terminology that our forces have tested in the crucible of battle and are well grounded in the theory and nature of war. At the same time, we must retain and adopt those aspects of effect-based thinking that are useful."

A quick review of newly published CF and army doctrine reveals that the CF has adopted some elements of EBAO. Perhaps like our allied colleagues, the more we make it a regular part of business and our doctrine, the less it will have an aura of mystery. Highly recommended, particularly to prompt robust discussions in the Mess.

Lieutenant-Colonel Williams, an artillery officer, and a former CO 1 RCHA, previously served as Deputy J5, Headquarters Canadian Expeditionary Forces Command (HQ CEFCOM) in Ottawa.

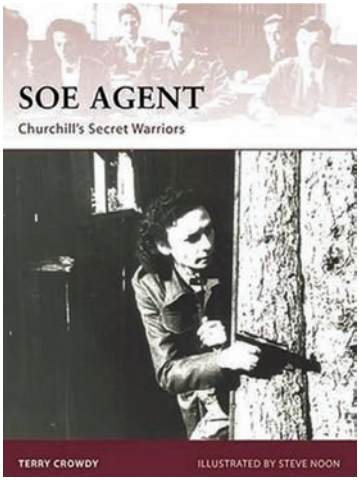
## Endnote

1. General J.N. Mattis, USMC, Memorandum for US Joint Forces Command-"Assessment of Effects-Based Operations", 14 August 2008.

## SOE AGENT: CHURCHILL'S SECRET WARRIORS

CROWDY, Terry. Osprey Publishing, 2008, softcover, 64 pages, $22.00,
ISBN-13: 978-1846032769

**Nancy Teeple**




The organization otherwise known as the Inter Services Research Bureau (ISRB) located at 64 Baker Street in London was the base of one of the most secretive organizations of the Second World War. As a creation of the unlikely relationship between right-wing Prime Minister Winston Churchill and left-wing Minister of Economic Warfare Hugh Dalton, the Special Operations Executive (SOE) emerged as a successful tool of resistance against the German occupation of Europe. Tasked by Churchill to "set Europe ablaze," the SOE facilitated resistance elements against Nazi occupation.

In a brief, yet detailed profile of the SOE, Terry Crowdy presents an historical account of the recruitment, training, deployment, and effectiveness of SOE agents during the Second World War. This account traces the creation, development, and evolution of the SOE, outlining the organizational structure, directorates and sections of specialization, such as intelligence, signals, finance, and supplies. In a catalogue of notable successes (and failures), Crowdy identifies the key tasks of the SOE agent, namely the infiltration and exfiltration of agents behind enemy lines, training and supplying resistance movements against German occupation, establishing contact between the resistance groups and Allied High Command, and undertaking the

assassination of high profile targets. The SOE training program was based upon pre-war manuals on guerrilla warfare and partisan leadership to train agents in the specifics of combat and paramilitary activities, demolitions, airborne missions, clandestine living, resistance to interrogation, propaganda, secret communications and code work, and industrial sabotage. This discussion documents the operational relationships which made the SOE effective, such as coordination with the Royal Air Force (RAF) to provide supply drops to resistance elements, parachuting agents into occupied territory, and identifying targets for destruction. Multinational collaborative efforts were demonstrated in Jedburgh teams, comprised of the SOE, operatives from the American Office of Strategic Services (OSS), and from Charles de Gaulle's Military Intelligence (MI) agency. However, complications in SOE's interagency relations were also noted, including the rivalry between the SOE and the Secret Intelligence Service known as MI6, and issues between the RAF and SOE concerning the precision of targets. Contrary to conventional thought, although SOE missions were risky, operatives had a better chance of survival than those in Bomber Command. Estimated at a 50% chance of survival, Crowdy states that the actual survival rate was closer to 75%.

The contents of this text are organized into topics and sub-topics, beginning with a discussion on the role and creation of SOE, followed by a discussion on agent selection and training, including special missions and weapons employed in special operations. Brief summaries elaborate upon specific details of interest, such as certain combat training methods, the assassination of Heydrich, and profiles of special operatives (such as a feature on female Agent Pearl Witherington). In addition, Crowdy provides a chronology of significant events and operations in Europe from 1938 to1946. The text is augmented with photographs of exercises, weapons, and archive letters, with explanatory notes. Watercolour illustrations attributed to professional historian artist Steve Noon depict special activities of SOE discussed in the text. Supplementary appendices appear in the back, which detail the specifics of SOE F Section Circuits in France, 1941-44, and Women Agents Sent to France, 1941-45. Following these is a list of reference material on the SOE and a subject index.

The references demonstrate a well-researched effort, documenting works by specialists in the field, such as Michael Richard Daniel Foot, expert in military intelligence and covert operations, and author of several monographs on the SOE; and Colonel Maurice Buckmaster, former leader of the French section of the SOE. Other references include public records from the British National Archives and singular works on SOE operational history by other military historians. Any biases in this work are undetermined as this account is relatively based upon archival and historical research. However, the discussion is not footnoted, so it is difficult to determine where certain details originate to check for validity.

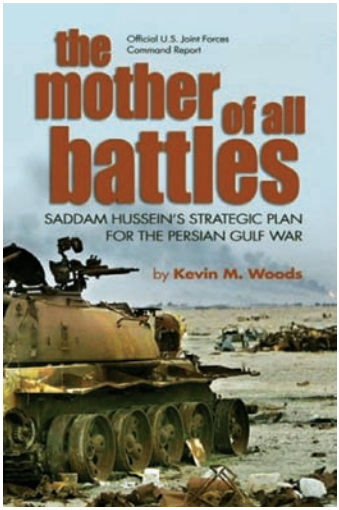
The author Terry Crowdy is a British military historian whose sparse academic background is offset by numerous well-researched publications on French military history, resistance and revolutionary warfare, and topics of espionage under Osprey's Warrior and Men-at-Arms series. Crowdy's other Osprey publications document Second World War deceptions, such as: Deceiving Hitler: Double-cross and Deception in World War II (2008); espionage history, The Enemy Within: A History of Spies, Spymasters and Espionage (2008, 2006); and military screw-ups, Military Misdemeanours: Corruption, Incompetence, Lust and Downright Stupidity: True Tales of Military Mischief (2007). In addition to an impressive publications record, Crowdy has experience working on the Fort Amherst restoration project, which demonstrably enriched his research interest and background in Napoleonic Wars and the French Revolution.

This book is a useful resource for anyone interested in expanding their knowledge and study of guerrilla warfare and secret operations of the Second World War, and is suitable material for the general public and academics alike. In particular, this text documents a number of the great efforts and sacrifices undertaken by volunteer special operators in a time of great crisis.

## THE MOTHER OF ALL BATTLES: SADDAM HUSSEIN'S STRATEGIC PLAN FOR THE PERSIAN GULF WAR

WOODS, Kevin M. Annapolis: The Naval Institute Press, 2008, paperback, 352 pages, $32.95, ISBN 978-1591149422

**Major A.B. Godefroy, CD, PhD**




*"Adversaries often think differently. The larger the gap between adversaries' cultures, histories, and languages, the more dramatic the differences in how each side views the strategic situation as well as the other side."*

*- Kevin M. Woods*

Secret materials discovered in several important official archives captured during the 2003 Iraq War offered the Western world its first detailed insight into Saddam Hussein's Iraq. Among the hundreds of thousands of pages of official Ba'ath party strategy and policy records were detailed files explaining many of the strategic and operational decisions taken by Iraqi military forces during nearly three decades of warfare, first against neighbouring Iran (1980-88), and then later against the United States and its allies. Kevin M. Wood's, *The Mother of all Battles: Saddam Hussein's Strategic Plan for the Persian Gulf War*, is the latest contribution to a growing list of publications produced from these sources as part of the United States (US) Joint Center for Operational Analysis (JCOA) Iraqi Perspectives Project (IPP).

The IPP was devised in early 2003 as part of a larger effort by U.S. forces to develop comprehensive analyses of U.S. military strengths and weaknesses observed during Operation Iraqi Freedom (OIF). Appreciating that no American analysis would be complete without a contextual analysis from the Iraq point of view, steps were initiated soon after the American occupation to complete a systematic two-year study of the former Iraqi regime and military. In addition to a 350 page classified report, a series of unclassified studies, including this book, were published through the Institute for Defence Analyses (IDA) and the Naval Institute Press (NIP).

This book is, without question, a mandatory reading requirement for anyone with an interest in Middle Eastern warfare and the recent conflicts in the Persian Gulf. Deriving inspiration from earlier works of its kind carried out following the end of the World War II, Wood's analysis makes great effort to be both objective and non-partisan, and most important, revealing of what was happening on 'the other side of the hill' during the 1990-91 Gulf War. At the strategic level, the reader gains much greater appreciation for the psychology of Saddam Hussein's leadership and decision-making, while at the operational and tactical level, there are many surprises regarding the successes and failures of the Iraqi military at war. The study is most helpful in providing context for the seemingly bizarre performance of Iraqi airpower during the war, including its infamous decision to fly the majority of its assets to refuge in Iran. New light is shed on the Iraqi navy as well, including the events surrounding those flotillas attacked by Canadian air forces on the night of 29-30 January 1991. Still the majority of the study deals with Iraq's Army, its command and control, as well as its performance on the battlefield against U.S. and allied forces.

In addition to operations, the book covers the many Iraqi lessons-learned conferences that were held following the war. Contrary to popular perceptions, the Iraqi military was innovative and adaptive, and made great efforts to glean what technical and tactical lessons they could from their battlefield experiences and the perceptions of their western adversaries. For example, in addition to circulating several official postwar U.S. congressional reports for review, Saddam Hussein ordered all of his senior military readership to read two books he had given them—the Gulf War memoirs written by U.S. General Schwarzkopf and

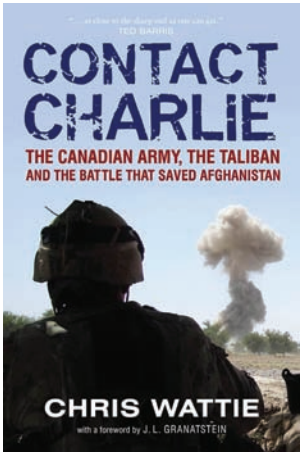
British General de la Billiere. Still, unfortunately for the army's senior command, nearly all of these proceedings were supervised by Saddam's internal security directorates or heavily overshadowed by his own political perceptions of what 'officially' happened. These 'corrective measures' ensured that except for certain issues, much of what might have benefited the Iraqi military was lost.

If nothing else, *Mother of all Battles* reminds the reader of the importance of including all sides in any analysis of conflict. Too often, ethnocentric approaches adopted by military historians conducting operational analyses do little more than feed the parochialism of their services, which in turn, can have disastrous results for capability development in preparation for the next conflict. Studies such as this are necessary to balance those tendencies and openly challenge them.

## CONTACT CHARLIE: THE CANADIAN ARMY, THE TALIBAN AND THE BATTLE THAT SAVED AFGHANISTAN

WATTIE, Chris. Toronto: Key Porter Books, 2008, hardcover, 304 pages, $32.95,
ISBN- 13: 978-1554700844

**Sergeant K. Grant, CD**




It is rare that a book about the Canadian military comes along that grabs your attention from the opening paragraph and holds it right to the last page. This is the case with the recently released best seller *Contact Charlie: The Canadian Army, the Taliban and the Battle That Saved Afghanistan*.

Written by former *National Post* reporter Chris Wattie, the book traces Charlie Company of 1 PPCLI during its tour in Afghanistan during the summer of 2006. This tour is most notable for having received the most decorations for bravery of any other unit since the Korean War. And, if the title of the book is to be believed, this tour also had a profound impact upon the Taliban's plans for the Canadian Army and the Kandahar region.

Histories of events, like Canada's participation in Afghanistan, take many forms. On one extreme, there are the official histories that do not appear until many years after the events, when all sides of the story can be examined in minute detail and a balanced, or at least a reasonably balanced, view of the events can be recounted. On the other extreme, there are those that are released shortly after the event, and take the form of a diary that represents one individual's view of the events as they occurred. *Contact Charlie* fits squarely between these two. As a battlefield narrative, it is a slice of the bigger picture and is written with the intent to capture the essence of Task Force Orion, Charlie Company's tour, with emphasis on particular events and battles as told through the eyes of the soldiers themselves. As such, it serves as an important contribution to understanding the nature and fabric of the Canadian soldier's role in Afghanistan. But, as an unofficial history, this approach has attracted some criticism for not being academic enough. While it is true that the book is not footnoted, nor follows certain accepted academic historical practices, it cannot be denied that Wattie has done his homework and produced a chronological history of one unit in battle (with maps!); something not seen many decades.

*Contact Charlie* is liberally peppered with anecdotes and quotes from the participants, gleaned from interviews conducted shortly after the events while their memories were fresh. There is much humour, as in the case of two sergeants arguing in the heat of battle over who forgot to pull the pin when only one of grenades that they each just threw went off. There is also the desperation of having to expose oneself to enemy fire just to get a weapon to function correctly. And too, there is much sadness, such as the description of the death of Sergeant Vaughn Ingram.

Wattie is better qualified than most reporters to write this book. He was raised in a military family and went to Royal Roads Military College before beginning his career in journalism. When he joined the *National Post* he was assigned to the military affairs desk. It was then that he decided to join the Governor General's Horse Guards as an officer to enhance his understanding of military affairs. He was surprised as anyone when, like the proverbial Mikey from the TV commercial, he found that he liked it, and decided to stay.

In addition to his military background (and the fact that he actually knows how to wear the kit), as a reporter Wattie spent a total of six months in Afghanistan embedded with the army. First in Kabul with the International Security Assistance Force (ISAF) in 2003, and then in January 2006 he traveled to Kandahar with the first troop of the Canadian battle group deployed to Southern Afghanistan, where he remained embedded for eight weeks. This experience lends verisimilitude to his claims that the current reporting from Afghanistan is somewhat lacking, and this book is his attempt to rectify some this situation.

Wattie's understanding of the military mindset serves him well for he has written a book that bridges the gap between the military and civilian worlds, and brings alive the inner workings of the military to the uninitiated. Though it gets off to a bit of a slow start with frequent sentence breaks to explain terms and situations (something the military reader may find annoying), he hits his stride quickly and the book takes off at a rollicking pace. His description of the battle sequences puts the reader right in the middle of the action. Indeed, his style is engaging and the book is written like a good set of military orders in that he gives us the situation, describes the mission, then follows up with execution and command elements. The opening chapter is particularly useful for the reader in helping them understand the mindset of the Taliban. Though Wattie openly admits that the scenario he builds is based upon speculation, the knowledgeable reader will acknowledge that he is not far off the mark.

But there is much more to *Contact Charlie* than a simple battlefield narrative. For the military audience, it is replete with examples of the need for, and the application of, basic soldering skills. Too, it serves as affirmation that sometimes battle *really* is just like training! Just as important, there are examples of the problems (sometimes mind boggling) encountered by higher command. For the civilian reader, the intensity of the writing is a rare window into the life of the Canadian soldier on the front lines of one of the toughest environments in the world, and one that will dispel any illusions about what our soldiers are actually doing in Afghanistan.

To date, there have been few books that tell the story of the Afghan conflict from the Canadian perspective, and none in the Canadian media—that I'm aware of—that take you onto the front line through an entire tour.

Wattie has done an excellent job of capturing the essence of the Charlie Company experience, and in this reviewer's opinion, will be an important reference for future historians when the time comes to write the official history of Canada's participation in Afghanistan. For the time being, however, anyone interested in the events of Afghanistan, or what its like to be on the front lines, would do well to have a copy of this book on their shelf, if for no other reason than it's a good read.

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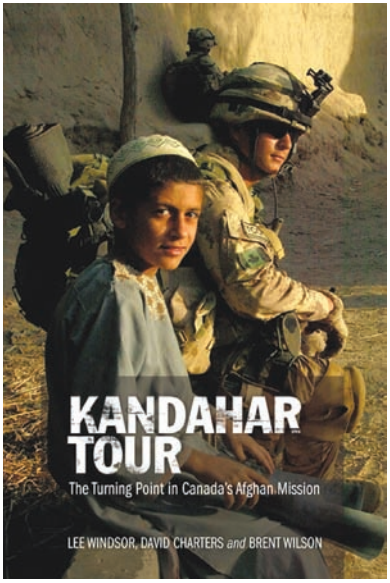
## KANDAHAR TOUR: THE TURNING POINT IN CANADA'S AFGHAN MISSION

WINDSOR, Lee, David Charters and Brent Wilson, Mississauga: John Wiley & Sons, 2008, hardcover, 264 pages, $36.95, ISBN-13: 978-0470157619

**Second Lieutenant T. Fitzgerald, M.A., LL.B. (2IRRC)**

*Kandahar Tour* provides a comprehensive and contextual account of the efforts and sacrifices of the members of Task Force (TF) 1-07, the third rotation, deployed to Afghanistan from February to August 2007. The effort of the authors, all members of the University of New Brunswick's Gregg Centre for the Study of War, while not without its flaws, is an enjoyable and thought-provoking book. It posits two themes. First, in addition to the




unparalleled military success the Canadian Forces enjoyed during Roto 1-07, attempts to reconstruct the country were equally successful. Second, while the media faithfully reported military successes, civil reconstruction efforts were not as widely publized.

To be sure, TF 1-07 victories over the Taliban cannot be gainsaid. At the Roto's commencement, the battle group was pursuing a predominantly conventional war against Tier 1 (dedicated) and Tier 2 (part-time) Taliban. At its end, the battles were usually fought against unknown, predominantly foreign insurgents fighting in small pockets, the Tier 2 local fighters having left for home and farm. Moreover, the Roto truly took the fight to the enemy moving outside Kandahar City and its outlying districts into rural Kandahar province. The battle group, whose core was the storied 2nd Battalion, The Royal Canadian Regiment (the "Royals") from Canadian Forces Base Gagetown, backed by reservists from equally famous militia units from across the Maritimes, through a series of courageous battles and audacious operations pushed the security and development zone further than it had been previously, thereby permitting United Nations and NATO-sponsored restoration initiatives to operate as intended, without molestation.

*Kandahar Tour* does not restrict itself to its very thorough review of the military aspects of the Roto. The narrative is interwoven with the experiences of the "rear company" left behind at Gagetown, with the support provided by the civilians of nearby Oromocto and Fredericton, of the good work provided by Canadian diplomats, aid-workers, Provincial Reconstruction Teams (PRT) and the Operational Mentoring and Liaison Teams (OMLT), among others. In brief, and this perhaps sets it apart from other books about our efforts in Afghanistan, *Kandahar Tour* considers the entire spectrum of Canadian assistance.

What *Kandahar Tour* emphasizes is that however one defines "success" or "victory," it cannot simply be synonymous with victory in combat and the defeat of the enemy on the field. The war in Afghanistan is an insurgency, which by its very nature is a complex, multifaceted situation necessitating a similar complex, political, military and economic response. The mere attriting of the enemy will not produce positive, long-term results. For every building that is destroyed, another must be build. If the poppy industry is to be eradicated, an alternative crop must be promoted with safe passage to markets guaranteed. If the rule of law is to be promoted in Afghanistan, open and independent courts and safe jails must be created, and non-corruptible Justice participants must be trained.

Recent comments by the Prime Minister and the Minister of National Defence, accompanied by the publication of *Counter-insurgency Operations* by the Department of National Defence, have, it is submitted, set the present Afghani conflict into its proper context. Victory in the field must be linked to development in the cities, towns and fields. Success must be characterized not merely as victory in the field, but with peace, security and freedom of the citizens of Afghanistan. If history has demonstrated anything in de-escalating insurgent violence, reconstruction must keep pace with, if not replace, military force as the primary purpose of the military.

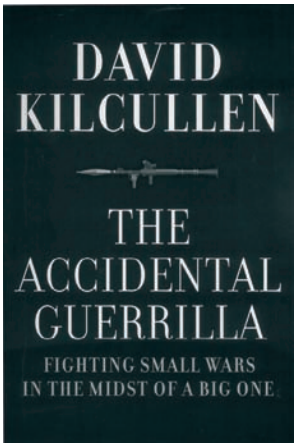
Some concern regarding the book's objectivity may be rightfully placed when one considers the authors' research was paid, in part, by a Department of National Defence grant. Its optimistic conclusions should be considered in light of recent events—further military deaths and injuries; increased insurgent activity; and flatlined economic development. To dismiss the book, however, as federal "propaganda" is unreasonably harsh and unwarranted. The subtext of *Kandahar Tour* is that a turning point has been achieved in Canada's Afghan mission. The mission has entered a new phase. Where before the emphasis was on military

force, now, either because it is imposed by immediate political/economic realities existent within Afghanistan or future Canadian domestic political imperatives, or a combination of mission. The mission has entered a new phase. Where before the emphasis was on military force, now, either because it is imposed by immediate political/economic realities existent within Afghanistan or future Canadian domestic political imperatives, or a combination of both, military force must accompany civil reconstruction, if not be supplanted by it. That all said, *Kandahar Tour* is a well-researched and comprehensive account of a new, largely unheard dimension of Canada's role in the rebuilding of Afghanistan. It underscores the mission statement of the Gregg Centre, namely that "war [is] a broad and complex phenomenon."

## THE ACCIDENTAL GUERRILLA: FIGHTING SMALL WARS IN THE MIDST OF A BIG ONE

KILCULLEN, David. Oxford University Press, USA, 2009, HC, 384 pages, $27.95,
ISBN-13: 978-0195368345

**Vincent Curtis**




This book is a must-read for those seeking a fresh, well-informed perspective on the war in Afghanistan, as well as the war on global terrorism as a whole. David Kilcullen served as counter-insurgency advisor to General David Petraeus during the Surge in Iraq in 2007. He is a former officer of the Australian Army, having served twenty years, and reaching the rank of Lieutenant-Colonel before he was seconded to the U.S. State Department in 2004. He is presently the State Department's chief strategist for counterterrorism. His field experience in the Australian Army included peace operations in Cyprus and Bougainville, and he commanded a company in East Timor during the 2002 intervention. He holds a doctorate in politics from the University of New South Wales. His thesis concerned the effects of guerrilla war on non-state political systems in traditional (i.e. primitive) societies. He employs the methods of ethnography, and for his thesis performed extended fieldwork in Indonesia and East Timor. His training in the Australian Defence Force School of Languages helped him communicate directly with tribesmen in Indonesia. He also commanded military advisory teams to the Indonesian Army. His qualifications, both academic and practical, to write this book are as extensive as they get. The book contains 584 endnotes.

Kilcullen's most important observation is that the Islamic world sees what we in the West call Jihadis as Takfiris. The difference between a jihadi and a takfiri is that a jihadi is respectable and a takfiri is not. A person engaged in jihad is engaged in a struggle that is right and proper in the eyes of Islam, whereas takfiri disobey the Koranic injunction against compulsion in religion. Takfirism is a heresy within Islam, and was outlawed in the 2005 Amman Message. Al-Qaeda is takfiri. Those engaged in the struggle against Al-Qaeda ought immediately to refer to them not as jihadi or as engaged in jihad, but as takfiri engaged in religious compulsion and heresy. Referring to Al-Qaeda as takfiri rightly wrong-foots them in respect of their central claim—the primacy of Islam.

Kilcullen sees the war on terrorism from a global and local perspective. Al-Qaeda and its predecessors have been at work globally for over twenty years. In Afghanistan, Pakistan, Iraq, and elsewhere takfiri operatives have been ingratiating themselves in weakly governed areas throughout the Muslim world. Their aim is to exploit local people and their grievances in furtherance of Al-Qaeda's ultimate aim, hence, the term "Accidental Guerrilla." The local people, while Muslim, are also tribal or traditional, and for many of them Islam is a religion and a cultural marker, but not a cause for world revolution. Their concerns are local; Al-Qaeda's are global.

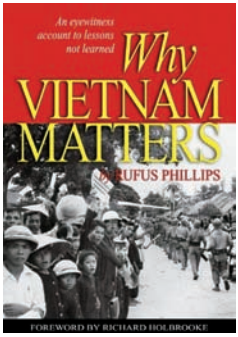
In furtherance of its aim of the establishment of a world-wide Caliphate, Al-Qaeda needs to exhaust the United States militarily and financially. Al-Qaeda observed that the United States makes war in a spectacular and expensive way. By drawing the United States to intervene in Islamic countries around the world, the intervention will trigger a local guerrilla war, and enough of these will exhaust the United States. Kilcullen separates the process of starting a local guerrilla war and the creation of accidental guerrillas to four phases: infection, contagion, intervention, and rejection. Al-Qaeda infects the populace, and spreads its influence until it becomes dominant. Al-Qaeda provokes a response by government, which invariably over-reacts—the intervention—and the population in turn responds by rejection and general violence. The accidental guerrilla is created in the rejection phase, and an American military intervention is invariably big enough to create a rejection. Local people, who couldn't care less about Al-Qaeda's global ambitions, are drawn into a fight which they see as defensive with the aggressor, America. Kilcullen sees the fight against Al-Qaeda as multi-generational, to last between 50 and 100 years, which is why the West has to treat the war as a marathon, not a sprint.

The book is quite readable, and shows that the author is fully conversant will all the theoretical work on counter-insurgency and guerrilla war. There is no one more qualified to write it. His style reflects that of a trained ethnologist: he seems to be always taking field notes, and there are the 584 references in the book. For purposes of the work, he adopts the ethnologist's philosophical position of moral relativism; that is, nobody is right or wrong but merely actors in the grand play, each with their own history and motivation. While this is scientifically respectable, it leads the author into subtle contradictions none of which matter to policy-makers. The book deserves a careful and thoughtful read by anyone searching for a better understanding of the war in Afghanistan, and the problems in Pakistan.

## WHY VIETNAM MATTERS: AN EYEWITNESS ACCOUNT OF LESSONS NOT LEARNED

RUFUS, Phillips. Annapolis: U.S. Naval Institute Press, 2008, hardcover, 384 pages, $45.71, ISBN-13: 978-1591146742

**J.R. McKay, PhD**




The title of this book is misleading. At first glance, one would expect a polemic about the importance of Vietnam to the Cold War. Only the use of the descriptor "eyewitness" suggests its true nature; its author, Rufus Phillips, was present in South Vietnam for a number of years and in a privileged position to observe and participate in the tumultuous business of diplomacy and development in the Republic of Vietnam (a.k.a. South Vietnam). The book is a collection of the author's memoirs from his times spent in South Vietnam.

Phillips divided the book into four parts. The first three correspond to his tours in South Vietnam. What was striking was that in each tour, a different government agency was responsible for the activity of advising the South Vietnamese on how to deal with the problem of national development. In his first tour, Phillips was a U.S. Army infantry Second Lieutenant seconded to the CIA. The next two tours saw him as a consultant for and then a member of the U.S. Agency for International Development (USAID). The interesting part of all this was that his tasks differed only slightly from tour to tour.

Part one of the book focused on his time with the Saigon Military Mission from 1954 to 1956. This part of the book described a terra incognita for most American authors on the Vietnam War. The Saigon Military Mission was a separate entity from the Military Advisory Assistance Group Vietnam (MAAG Vietnam), the American mission that funnelled equipment to the French; its purpose was to replicate the Philippines' successful counter-insurgency. While the Republic of Vietnam had come into existence because of the international treaty signed in 1954 in Geneva, itself a result of the French defeat at Dien Bien Phu, this did not mean that the South Vietnamese had a monopoly on violence. Other armed groups existed and the central government needed to exert greater control. The CIA sent the American

advisor with Philippines experience—an air force colonel named Edward G. Lansdale. The name may be familiar to some readers, as he is often portrayed in a negative light for his support for the Vietnamese prime minister of the era, Ngo Dinh Diem. Lansdale's advice and techniques were instrumental in Diem's consolidation of power in the 1950s. Phillips portrayed him in a surprisingly sympathetic light and pointed out that much of Lansdale's plans and schemes were attempts to increase the government's utility in South Vietnamese eyes. He described a series of operations in the countryside designed to provide basic services to the people in order to counter Viet Minh propaganda or boost electoral results. Phillips left South Vietnam in 1956 to serve as a CIA Officer in Laos.

After his stint with the CIA and a brief foray into the private sector, Phillips became a consultant for USAID and returned to Vietnam in 1962. This time, it was to make recommendations for a counter-insurgency strategy; in this case, it was how to use developmental projects to increase popular support for the South Vietnamese government in the face of a growing Communist insurgency supported by North Vietnam. This was also the era where the South Vietnamese government tried to build strategic hamlets to replicate the British success in Malaya. It failed as the Malayan solution relied upon conditions that did not exist in South Vietnam. Shortly after his return, Phillips recalled the Buddhist crisis and its destabilizing effects on the Diem government and the Kennedy Administration. This culminated in the overthrow and execution of Ngo Dinh Diem. This instability ultimately played into the Communist's hands.

The third part of the book described the events from 1964 to 1968 in both Washington and Saigon. This part of the book provided a different perspective on the early years of the war. Instead of discussing the slow drift from an attempt to coerce the North Vietnamese into ending the insurgency to the land-based attempts to defeat it, the book discussed the bureaucratic infighting and attempts by all parties to control the activities of the others in order to suit their needs. This suggests that despite all the good intentions of all parties, this may be one of the realities of interagency and/or combined operations.

There was a fourth part to the book in which Phillips commented on the nature of the more recent attempts at counter-insurgencies in Iraq and Afghanistan. In this, he summarized what he believed were the "lessons not learned." This included:

- Interagency teams (i.e. the Ambassador and staff, the military commander and staff, and the head of the development mission) need to be capable of resolving difficulties quickly and locally. Anything else might lead to an extension of bureaucratic battles into the theatre of operations.
- Countering an insurgency is a lengthy process based more upon gaining and maintaining popular support through sound political advice (a function he attributed to the State Department), and teaching others how to provide useful services to their populations, than it is about eliminating insurgents.
- Development is a tool of foreign policy and needs to remain subordinate to foreign policy goals.

Such points may be of interest to those with experience or an interest in interagency operations (a.k.a. the 3D Approach). Some may find themselves agreeing with Phillips' arguments, while others might take exception to them. The comments, however, leave one with the impression that Phillips believes that such problems spring from organizational narcissism and a general ignorance of the needs and wishes of local populations. His beliefs, borne of the Vietnam experience, lend credence to his arguments about other conflicts, but it is best left to others to judge whether such "lessons not learned" reflect problems common to all counter-insurgency efforts.

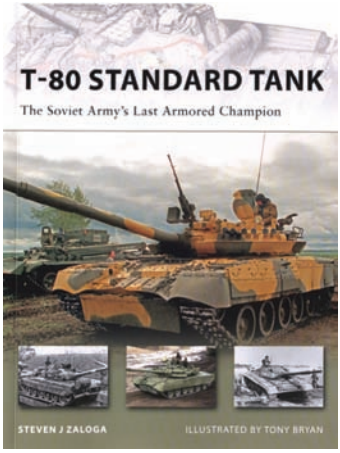
## Endnote

1. For details, see Peter Busch, "Killing the 'Vietcong': The British Advisory Mission and the Strategic Hamlet Programme," The Journal of Strategic Studies, Vol. 25, No. 1 (March 2002): 135-162.

## T-80 STANDARD TANK: THE SOVIET ARMY'S LAST ARMORED CHAMPION

ZALOGA, Steven J.. Oxford: Osprey Publishing, 2009, paperback, 48 pages, $19.95,
ISBN-13: 978-184632448

**Major A.B. Godefroy, CD, PhD, pIsc**




The nemesis of Canadian and NATO armour for over a decade, the T-80 Main Battle Tank (MBT) posed a most serious threat to 4 Canadian Mechanized Brigade Group (4 CMBG) during its latter days of defending West Germany. Still, as Steven J. Zaloga reveals in his recent book, *T-80 Standard Tank: The Soviet Army's Last Armored Champion*, the steel beast was not always what it appeared to be.

Number 152 in the Osprey Vanguard series, this book is squarely focused on the technical design and developmental history of the T-80 tank and follows its conceptual evolution from its predecessor, the T-64. One is quickly introduced to the overwhelming complexity and political competitiveness of the Soviet tank design bureau system, and it leaves one to wonder at times if they realized they were actually degrading their overall defence capabilities by working against each other so often. The end result is, however, a capable enough MBT, but one that took far too long to develop, and in the end, needed many adjustments to stave off the threats posed by its three main adversaries—Abrams, Challenger, and Leopard.

Having read and reviewed many of the previous Osprey books I was initially excited about the arrival of this volume, but after consuming it I came away feeling unsatisfied. Appreciating that these books are generally limited in space and follow a standard layout and content recipe, this book spends too much time simply identifying and listing every project (*obiekt*) in chronological order and too little time putting these developments into the larger context of Soviet concepts about direct fire support capability. For example, the book oddly explains in details which main armaments were chosen, but not why or what their effective ranges were. In armoured warfare, the ability to reach farther and hit first is important, yet Zaloga does not address such issues here except when briefly discussing the T-80s *Kobra* missile round. However, the book does give good detail on other aspects of the MBT, such as its engine plant and explosive reactive armour development. Here, the author provides sufficient context for the reader to appreciate why certain design decisions were being made.

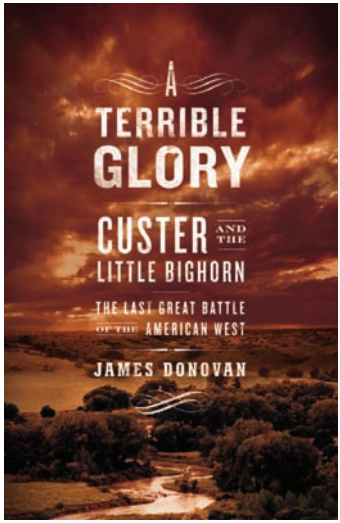
Given that the T-80 has seen extensive combat operations, one would expect a book such as this to discuss whether the design actually succeeded in battle. Yet again, the book falls short on this account, and other than the briefest description of the Russian armour debacle at Grozniy on 31 December 1994, the reader will have to look for details on the T-80's combat effectiveness elsewhere.

Despite its shortcomings, this book fits the usual Osprey Vanguard series design and offers plentiful colour photographs, technical cutaways, and very good vehicle illustration plates. For those already collecting the series, *T-80 Standard Tank: The Soviet Army's Last Armored Champion*, will make an adequate addition.

## A TERRIBLE GLORY: CUSTER AND THE LITTLE BIGHORN—THE LAST GREAT BATTLE OF THE AMERICAN WEST

Donovan, James. New York: Little, Brown & Company, 2008, hardcover, 544 pages, $31.25, ISBN-13: 978-0316155786

**Second Lieutenant T. Fitzgerald, M.A., LL.B. (2IRRC)**




The facts are well-known and have passed into legend. On a sunny warm June afternoon in 1876, General George Armstrong Custer led five under-strength companies of the Seventh Cavalry to their deaths along the banks and coulees of the Little Big Horn River. In direct disobedience to his commander's orders, and having divided his command in enemy territory without proper reconnaissance, and thirsting for glory and perhaps personal redemption, Custer and his 215 men died on a desolate hill surrounded by thousands of well-armed, well-led Cheyenne and Lakota Sioux warriors.

Custer's "Last Stand" has been the subject of a small library of books[1] and depicted in a number of Hollywood and television movies.[2] James Donovan's well-researched and clearly written account, *A Terrible Glory*, offers the perspective of the battle from the Aboriginal point of view as well as the traditional American viewpoint. It goes further in debunking many of the myths surrounding the battle and demonstrates, powerfully, the cover-up that followed the battle.

*A Terrible Glory* recounts in great detail the events leading up to the afternoon of June 25, 1876. In the summer of that year, the U.S. government sent three widely separate columns to find and to converge on the Indian "hostiles" and to convey them back to their Reserves. What was unknown at the time was this concentration of primarily Northern Cheyenne and Sioux was the largest army of men, women, children and warriors ever assembled on the Plains. With 2000 fast moving braves, led for the first time by a single Chief, Sitting Bull of the Hunkpapa Sioux, the "hostiles" presented a formidable opponent. Having defeated the southern column under General Crook on June 17th in a daylong battle, the Indian camp was moving away from the pursuing 7th Cavalry when Custer found them.

Notwithstanding, knowing that a large concentration of Indians was nearby, Custer, inexplicably, divided his regiment into three columns. Major Marcus Reno launched a diversionary attack along the west side of the river. Reno's attack quickly fell apart in the face of mounting opposition whereupon his company retreated across heavy brush, forded a river and continued up a steep embankment, Reno's Hill, where they remained, completely useless to Custer, until they were relieved by Captain Frederick Benteen, who was protecting the pack train with four companies of his own, later that afternoon. The two subordinates made no attempt to "march to the sound of the guns" of the developing battle and one is left to wonder what could have occurred had Reno and Benteen exhibited more intestinal fortitude.[3]

Having divided his command once, Custer compounded his error by again splitting his command. As he advanced on the camp, he ordered Captain Myles Keogh with three companies to fight a delaying action as he moved forward in an attempt to attack the main camp. Eschewing their customary skirmishing style of Plains Indian warfare, the Sioux opted for a pitched conventional battle. Forced away from the camp by their repeated onslaughts and onto Last Stand Hill, Custer's command was killed to the men.[4] Relief came the following day and all but three of the officers' and men's bodies were located.[5] The only survivor was Keogh's mount, Comanche.

*A Terrible Glory* is, by far, the clearest, best researched and most accurate account of Custer's last stand and its aftermath. It is probably the most objective. Relying upon well and little known sources, private and public documents, Donovan seeks to apportion fault of the

battle fairly. Custer's share of the blame rests on his personal rashness and impulsiveness. He had delegated the training of his command to his subordinates, but never followed up to ensure that the training had occurred. He was on poor terms with most of his officers and did not fit responsibilities to capabilities. He went into the field with less than half his command and thus had to rely upon less experienced company commanders. Finally, notwithstanding his reputation as an "Indian fighter," Custer had not learned from the Battle of the Washita in 1868 wherein he divided his command, and without proper reconnaissance, attacked a sleeping village only narrowly avoiding disaster by a hasty withdrawal. In essence, the 7th and Custer were not up to the task assigned them.

The blame does not rest with Custer as Donovan, a self-confessed Custerphile, convincingly demonstrates. Crook is criticized for not pushing forward after the Battle of the Rosebud to link up with Custer as planned. Brigadier-General Terry, the overall commander, is condemned for essentially abandoning command decisions and not having a tighter hold on the 7th, and finally, the U.S. government's irresponsible Indian policy and its lack of financial support to the military, whose mandate it was to enforce said policy, is the subject of unfavourable comment.

Custer was not long in his grave[6] when the government commenced a program to vilify Custer and to lessen the impact of the battle in the public view. In an 1879 Court of Inquiry investigating Reno's conduct at the battle, several officers perjured themselves for "the honour of the Regiment" rather than testify about Reno's apparent drunkenness and cowardice on the field. No less than 24 Medals of Honour were awarded to the troopers of the 7th (the most awarded in one battle until the Battle of Iwo Jima, sixty nine years later), an attempt Donovan asserts to minimize the public relations disaster following the battle. Donovan recounts a number of individuals who were hounded by the government when their version of the battle did not accord with the "official" history. Finally, perhaps in an attempt to redeem their lost honour, under the command of some of the same officers who had fought at the Little Big Horn, the 7th Cavalry massacred 200 defenceless Indians on December 29, 1890, at Wounded Knee—an engagement which again garnered 18 Medals of Honour and a complete exoneration of the Regiment in a subsequent Court of Inquiry.

*A Terrible Glory* is a brilliantly told story of courage and of cowardice, of honour and of disgrace. Except perhaps for the Battle of Gettysburg, no other battle in American history evokes more passion or more scholarship. Donovan's book may not be the final word on the subject, but it is clearly one of the most authoritative.

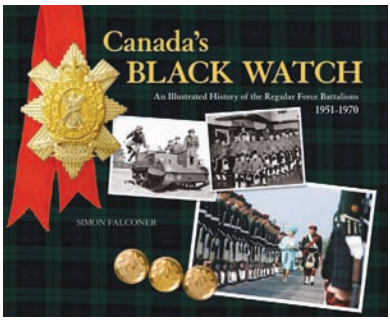
## Endnotes

1. Stephen Ambrose, Crazy Horse and Custer: The Parallel Lives of Two American Warriors (New York: Doubleday, 1975); Evan Connell, Son of the Morning Star (New York: Harper & Row Publishers, 1984); Jeffrey D. Wert, Custer: The Controversial Life of George Armstrong Custer (New York: Touchstone, 1997); Jim Donovan, Custer and the Little Big Horn: The Man, the Mystery, the Myth (Stillwater: Voyageur Press Inc., 2001).
2. They Died with Their Boots On, dir. Raoul Walsh, perf. Errol Flynn, Warner Brothers, 1941; Custer of the West, dir. Robert Siodmak, perf. Robert Shaw, Cinerama, 1967; Little Big Man, dir. Arthur Penn, perf. Dustin Hoffman, Cinema Center Films, 1970; Son of the Morning Star, dir. Mike Robe, perf. Gary Cole, Preston Stephen Fischer Company, 1991 (TV); Twilight Zone, "The 7th is Made Up of Phantoms," dir. Alan Crosland Jr., perf. Ron Foster, 1963 (TV).
3 The only subordinate who attempted to rescue Custer, Captain Thomas Weir with D Company, was turned back at a point now named Weir Ridge.
4 There is the lingering doubt that some troopers of the 7th escaped the final massacre. Lt Henry Moore Herrington of C Company is most often indicated as the sole survivor as his body was never recovered. No authoritative evidence has ever been produced to substantiate the claim, but all members of C, E, I, K and L Companies were killed on Last Stand Hill.
5 The body of Lt Sturgis of E Company (whose father, LCol Samuel Davis Sturgis was the actual officer commanding the 7th, but at the time of the battle was on detached duty) was never found. A headless corpse wearing Sturgis' uniform containing his personal effects was found in the Indian camp along with a burned human skull after the battle.
6. Custer was officially buried at the U.S. Military Academy of West Point in 1877 though, as Donovan points out, there is some doubt as to the authenticity of the remains in the tomb.

## CANADA'S BLACK WATCH: AN ILLUSTRATED HISTORY OF THE REGULAR FORCE BATTALIONS 1951-1970

FALCONER, Simon. Fredericton: Goose Lane, 2008, hardcover, 168 pages, $35.00, ISBN-10: 0864925212

**A. Iarocci, Canadian War Museum**




The Regular Force battalions of the Black Watch were formed in 1951, in the threatening context of a rapidly escalating Cold War. Drawing its members from cities across Canada, the regiment was based in Nova Scotia before moving on to Sussex, and later, Gagetown, New Brunswick. The First and Second Battalions served in virtually every capacity during their nineteen-year lifespan, including NATO and UN duties spanning from Germany, to Korea, to Cyprus. Both battalions were ultimately disbanded in 1970 as the Canadian Forces were restructured through the Unification program.

This regimental history assumes a shape comparable with other Canadian examples published in recent years, a format combining attractive design and dynamic illustrations with an easily accessible historical narrative. Falconer's work succeeds on two levels in particular. First, and most fundamentally, the author provides a concise narrative of the regular battalions' stories for past, present, and future members of the Black Watch, as well as for general readers who may otherwise have no particular familiarity with the regiment. This is a difficult balance to strike. More broadly, the book neatly encapsulates the Canadian Army's experience during the early, crucial years of the Cold War, a period that has been too often neglected by popular military historians and commentators in favour of the First and Second World Wars, or more recently, contemporary post-9/11 operations. The written narrative, which situates the regular battalions' activities within a broad national and global context, is reinforced by a useful selection of illustrations. These comprise period photographs and close-up views of kit and weapons employed by Canadian soldiers from the immediate post-war period to the advent of Unification. As such, the book sheds welcome light on Canadian military culture during a long phase of training and preparation for a major war that ultimately never came. Perhaps implicitly, the reader is left with the impression that it is better to train for a war that never comes than to engage in one without adequate preparation.

### Endnote

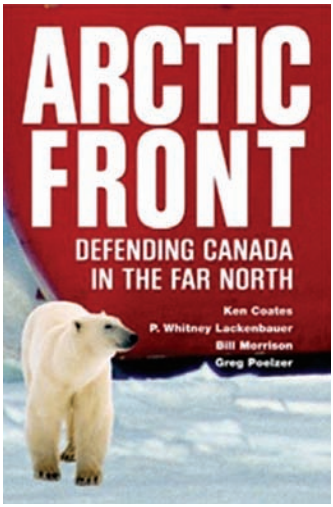
1. For examples, see Donald Graves, Century of Service: The History of the South Alberta Light Horse (Toronto: Robin Brass, 2005), or John Marteinson, The Governor General's Horse Guards: Second to None (Toronto: Robin Brass, 2002).

## ARCTIC FRONT: DEFENDING CANADA IN THE FAR NORTH

COATES, Ken S., Whitney Lackenbauer, William R. Morrison, and Greg Poelzer. Toronto: Thomas Allen Publishers, 2008, hardcover, 261 pages, $29.95, ISBN-13: 978-0887623554

**Nancy Teeple**

The publication of *Arctic Front* is timely in light of increasing international interest in the Canadian Arctic, with the opening of alternative routes of maritime transit, potential sources of significant oil and gas deposits, opportunities to exploit diamond mines and fisheries, and the resurgence of questions regarding sovereignty over the Northwest Passage. *Arctic Front* considers Canada's neglect of its role as an Arctic nation in its haphazard approach to sovereignty and infrastructure development in the North. The opening remarks that "Arctic sovereignty seems to be the zombie—the dead issue that refuses to stay




dead—of Canadian public affairs," highlights the trend in which Canada only takes in interest in the Arctic when it perceives sovereignty to be threatened. Once the crisis passes, Canadians tend to return to complacency and resume ignoring the North. Thus, the authors assert that the current issues of Canadian sovereignty and security are not new, but that global warming and energy needs have now made them urgent—an urgency which highlights Canada's unpreparedness to respond to the emerging challenges in the North in the 21st century. Global warming and the race for resources have opened the Arctic front, which has local, global, and circumpolar implications.

*Arctic Front* is not a collection of essays, but a collective compilation of expertise representing the coordinated effort of four Arctic experts with individual backgrounds in northern politics, security and defence, and history. Specifically, P. Whitney Lackenbauer is notable among the list of authors, as he represents one of the foremost experts on Canadian Arctic defence and security. He is known within the academic and defence communities for his publications on the Canadian Rangers and their role in providing a northern presence as Arctic sovereignty patrols.

In their evaluation of the historical and contemporary political aspects of Canada's role as an Arctic nation, the authors consider northern social issues in conjunction with defence requirements. Notably, *Arctic Front* represents a departure from conventional Canadian thinking about Arctic sovereignty and security, imploring Canadian citizens and leadership to move away from the myth that sovereignty is at risk, and to pay more attention to taking responsibility for defence and providing a sustainable social infrastructure for northern communities. The stated objective is to change the national debate on Arctic sovereignty with respect to Canadian control over the Arctic and national responsibilities in the North. In presenting the background of Canada's Arctic sovereignty debate, which dates back to the 1880s, the authors demonstrate that Canada has a history, which Canadians seem to forget and repeat the same old pattern with each new challenge to the same old question. Therefore, the authors hope to "challenge Canadian assumptions about its northern role and commitments."

This work is an impressive attempt to combine all the issues pertaining to Canada's interest in the Arctic, namely legal disputes, security and defence requirements, sovereignty challenges, scientific research, and social development. The discussion provides a unique, and probably unpopular, but well-documented perspective on the controversial voyages of the U.S. in the Northwest Passage (NWP)—demonstrating that the voyages were taken with full consultation and cooperation with Canada. The authors explain the difficult U.S. position indicating that if they were to acknowledge the NWP as internal Canadian waters, then this assertion could affect the status of passages elsewhere in the world, which in turn would challenge U.S. access and operation within international waterways, such as the Panama Canal or Suez Canal.

The plight of northern communities is considered in the authors' comparison of the Arctic with certain African countries (such as Chad) where Canada has never completed nation building and has relied heavily upon the U.S. for defence in responding to threats in the North. Notably, the authors state that Canada has a greater capacity for working in desert environments than Arctic ones—a reflection of Canada's global strategic interests and commitments.

Future concepts groups might disagree with the first line in the conclusion that "only a fool would try to predict where Canada will stand in the Arctic in 2028." However, the conclusion is hopeful that Canada might assert itself as a northern nation and commit the assets required for an effective defence and sovereignty presence. Yet, the authors also acknowledge that the current interest could diminish with a few cold winters, which would weaken global warming related concerns.

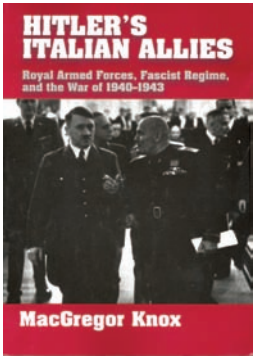
Indeed, the conclusion is the most thought-provoking chapter, in which the authors provide Canada with a report card on two significant northern issues: defence, and Canada's treatment of the North from a social, political, and economic perspective. The socio-political economic treatment receives an "F" because Canada fails to integrate the North into the national identity as anything more than a symbol; whereas, defence receives a "B-" for taking a proactive approach under the Harper government. However, the authors indicate that Canadian defence has a long way to go in terms of being operable in the Arctic.

*Arctic Front* provides a comprehensive and well-documented review of Canadian defence interests, capabilities, and requirements in the North. This book is recommended to the Canadian security and defence community, as well as anyone interested in past and present (and future) Arctic security issues.

## HITLER'S ITALIAN ALLIES: ROYAL ARMED FORCES, FASCIST REGIME, AND THE WAR OF 1940-43

MACGREGOR, Knox , Cambridge: Cambridge University Press, 2009, paperback, 207 pages, $24.95, ISBN 978-0521747134

**Major A.B. Godefroy, CD, PhD, pIsc**




Perhaps no other military force in recent history has suffered greater popular ridicule for its combat performance than the Royal Armed Forces of Italy during the Second World War. Beginning with its difficult campaign to annex Ethiopia in 1935-36, the Italian military suffered continual defeat at the hands of its adversaries in Africa, Greece, Albania, and Russia until its final capitulation in 1943 following the Allied invasion of Sicily and the Italian mainland. At first glance, it seemed almost incredulous that any military could plan so badly and fight so poorly. Dr. MacGregor Knox, however, explains how this denouement occurred in his book, *Hitler's Italian Allies: Royal Armed Forces, Fascist Regime, and the War of 1940-43*.

Despite its ultimate success in the First World War, Italy's military institutions stumbled during the interwar period for a number of reasons ranging from strategic incompetence to tactical indecisiveness. As Knox explains without sympathy or even empathy, the Italian Armed Forces suffered a tremendous degree of intellectual and innovative paralysis after the Great War, was plagued by intrigue and political infighting at its most senior levels, and ultimately failed to realize even the most basic doctrinal and tactical practices that may have given its combat forces a chance against Italy's much better prepared and equipped adversaries.

Using almost exclusively Italian and German primary sources, Knox paints a dismal picture from the Italian perspective of its own strategic, operational, and tactical ineptitude during war. There is little need for the author to further expand or explain Italy's failings, in fact, as the surviving documents and memoirs speak largely for themselves. Knox reveals high-level decisions made, for example, to retain biplanes in favour of monoplanes; to reject German offers to build Panzers in Italy; to flippantly accept that as much as 60 percent of its merchant shipping would be lost after declaring war, to purposely deny air escort for its naval convoys, to refuse rotation of its troops out of combat zones, and even to deny the delivery of mail to its soldiers, considering it a wasteful and unnecessary exercise.

Yet Knox takes these seemingly bizarre and incredulous decisions and places them within the greater context of Italy's politics in the years leading up to and during the Second World War. What the reader discovers is a monarchy and government in opposition, a society in political and social crisis, and after the war, a government and military feeling greatly held hostage to their Nazi 'allies'. It is this context that explains some, though not all, of the indecision of the Royal Armed Forces, and is what makes this book a worthy read for those interested in this period and theatre of war.

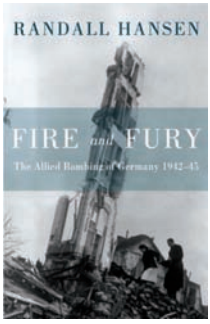
The book had its genesis in an essay being crafted for another work, but it soon outgrew its original purpose to create a monograph of its own. This origin shows through in the unpolished structure of the book, and despite its thematic claim one often feels too often that they're reading a collection of separate essays especially given the number of times the same basic information is repeated throughout. Still, the book has tremendous merit, and is complimented for including a solid bibliographical note, a section too often absent from current scholarly publications.

Overall, Knox has delivered a detailed and valuable study of force development and application gone horribly wrong, making this book valuable for soldiers and academics alike.

## FIRE AND FURY: THE ALLIED BOMBING OF GERMANY 1942-45

Hansen, Randall. Toronto: Doubleday, 2008, hardcover, 353 pages, $34.95,
ISBN 978-0385664035

**Lieutenant-Colonel P.J. Williams, CD**




For one who had a relative killed in action in World War II while serving as a member of Bomber Command, the subject matter of this book has always held a particular fascination. Certainly there is no shortage of material on the Allied Bombing Offensive over Germany, and so the reader might be forgiven for asking what another book on this subject has to add.

However, given that in this country, the debate over a display about the Bombing Campaign in the Canadian War Museum elicited strong opinions on all sides of the issue; and, that in contemporary military operations questions concerning interpretation of the higher commanders intent, the use of directive control, the application of assessment methodologies, and a rightful concern over civilian casualties all continue to exist, this book retains its value even in the current operational environment. Finally, the fact that the author is a Canadian and a Professor of politics and holds a Canada Research Chair at the University of Toronto, should appeal to readers in this country in particular.

In order to put this account in context from a Canadian perspective, it is worthwhile to remember that by the war's end 25% of Bomber Command's crews were Canadian, the second largest contribution of any Allied nation. In total, some 40,000 Canadians served in Bomber Command and of these, one quarter lost their lives.

In an attempt to perhaps make the reader understand what it was like to be subject to the bombing campaign, he begins with an account of the RAF raid on Hamburg in July 1943, an event which resulted in a phenomenon which came to be known as "firestorm." Despite contemporary wisdom, the Royal Air Force (RAF) was initially a proponent of precision bombing, a technique which has over time, come to associated solely with the United States bombing effort.

However, the RAF's initial efforts directed in this way proved largely ineffectual, and so by 1941, the idea of targeting German "morale" began to gain ascendancy. Air Chief Marshal Portal, the UK Chief of the Air Staff, wrote to Churchill in late 1941 that, "In highly industrial counties such as Germany and England it is in the thickly populated towns that the moral effect of bombing will be chiefly felt…" This concept then took official manifestation in a Directive issued by the UK Air Ministry in February 1942, which described how the bombing campaign would be conducted. The directive stated that bombing henceforth was to be, "…focused on the morale of the enemy civilian population and in particular of the industrial workers." To ensure that the intent of this directive was fulfilled, Portal sent a separate communication the next day which stated, "Ref the new bombing directive: I suppose it is clear that the aiming points are to be built up areas, not for instance the dockyards or factories…"

The Americans, in the European Theatre of Operations (ETO), at least, generally followed an approach characterized by more of an adherence to precision bombing and this by daylight, whereas the British conducted mostly night-time operations. The US approach in the Pacific theatre, with the massive use of B-29 bombers in raids on Japanese cities was quite different, an analysis of which would be a valuable comparative study by Mr Hansen to further knowledge in this area.

Throughout the war, what eventually became a combined Commonwealth/US round-the-clock effort was the subject of continued controversy over priorities of targets, which resulted in subsequent amendments to the original Directive, as well as debates over the morality of bombing urban areas, including doubts in Churchill's mind as to the approach to the campaign. What this reviewer found particularly fascinating was an extended correspondence between Portal and Harris in 1944 on the conduct of the bombing campaign. One gets the sense that Portal did not believe that Harris was conducting operations within the intent of the Directives issued him, while Harris counters, in a much stronger tone, defending his prosecution of the campaign. Indeed, this correspondence alone could be worth an academic study in itself. In retrospect, that it took place at all seems extraordinary: it seems hard to believe that such exchanges could take place today without the issue resulting in the Directive being re-written in such a way as to clarify the intent, on the one extreme, or the subordinate commander being replaced, on the other.

In the end the author concludes that, "Area bombing not only failed to win the war, it probably prolonged it", and argues that a greater focus on certain types of targets (transport, oil, ball bearings, which were included in the Portal/Harris correspondence above), would have had more decisive results. In his assessment of Harris, Hansen calls him impressive, decisive, tenacious, yet one who by war's end, "…had made the complete obliteration of German cities the end goal."

In conducting research, the author has relied not only on British, American and German archival material, but has also made extensive use of personal accounts and reports of both German and allied eyewitnesses, and the bibliographical reference in this case run to four pages alone. However, I would have been interested to learn to what extent Canadian military and political archives would have unlocked any secrets as to the extent that the prosecution of the bombing campaign was debated at home.

The book's conclusions may not appeal to all readers, though in his preface the authors states that, "…it is important to bear in mind that an evaluation of the effects and the morality of the Canadian, British and American bombing war can cast no aspersions on the bravery and sincerity of the young men who chose to serve in Bomber Command, still less on the memory of the ten thousand Canadian who died over Europe." A well researched historical study, but one with modern relevance, this book is very highly recommended.

## M551 SHERIDAN: US AIRMOBILE TANKS 1941-2001

ZALOGA, Steven J.. Oxford: Osprey Publishing, 2009, paperback, 48 pages, $19.95,
ISBN-13: 978-1846033919


**Major A.B. Godefroy, CD, PhD, pIsc**

The desire to bring self-propelled armour to bear in support of U.S. airborne forces presented a considerable challenge to designers during the Second World War. Aircraft capable of lifting a multi-ton heavy tank had yet to appear, and the initial compromises between weight and firepower were brutal.

Steven J. Zaloga's book, M551 Sheridan: US Airmobile Tanks 1941-2001, offers a concise overview of the decades-long American quest to "drop" armour directly into the heat of battle. Beginning with an examination of the Marmon-Herrington M22 Locust aero light tank and following various designs through to the deployment of the M551 Sheridan, Zaloga offers the reader a brief glimpse into a particularly challenging land warfare

design problem.

Like all books in the Osprey Vanguard series, space and layout considerations allow only the briefest explanations and analysis of the subject, but Zaloga does a better job here of covering the design and deployment of U.S. airmobile armour. He touches on the troubled life of the M22 and its only combat deployment via Hamilcar glider during Operation Varsity in 1945, and then examines the evolution of the M56 Scorpion SPAT (Self-Propelled Anti-Tank) that served as the U.S. primary airborne tracked fighting vehicle during the late 1950s and early 1960s. The M56 saw combat service in Vietnam, but was considered a poor choice as the exposed crew was constantly susceptible to small arms fire. The M551 Sheridan soon replaced the M56 in operational service.

As Zaloga rightly points out, the M551 was a vehicle very much representative of the period in which it was conceived. As the United States moved away from its mutually assured destruction defence policies toward a flexible response strategy at the end of the 1950s, an emphasis returned to fielding advanced conventional weapons on the battlefield. This in part explains the rather unique armaments of the Sheridan, which consisted of both traditional 152 mm tank round ammunition as well as a tube-launched 152 mm MGM-51 Shillelagh infrared command-guided missile.

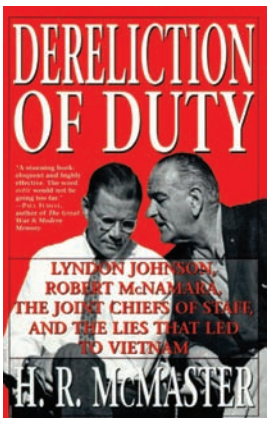
Development and deployment of the M551 was problematic from the beginning. The overall design suffered from many errors, including weak armour protection, the lack of anti-personnel protection armament, a lack of night-fighting capability, and no dozer kit. In addition, the vehicle suffered from chronic electrical malfunctions, forcing crews to jury-rig wiring so that guns would continue to fire despite system failures. In combat, the vehicles were highly vulnerable to rocket-propelled grenade (RPG)-2 and RPG-7 rounds, making them less respected than the older but more robust M48A3 Patton tanks.

For all its problems, the M551 Sheridan survived its Vietnam experience to be upgraded for further service in Europe, as “VISMODS” (visual modifications) for opposing forces at the National Training Center, and later during Operation Just Cause in Panama, where it played a central role in the only combat parachute drop of tanks in history. The final combat deployment of highly upgraded M551s was during Operation Desert Storm, where the Shillelagh missile was fired in anger for the first, and last, time.

Zaloga’s overview of the M551 is a useful examination of a focused land force development problem, and this book is recommended as a case study for those engaged in future combat vehicle concepts and design work.

## DERELICTION OF DUTY: LYNDON JOHNSON, ROBERT MCNAMARA, THE JOINT CHIEFS OF STAFF AND THE LIES THAT LED TO VIETNAM

MCMASTER, H.R.. New York: Harper Collins Publishers, 1998, paperback, 446 pages, $19.95, ISBN-10: 006092908.




**Second Lieutenant T. Fitzgerald, M.A., LL.B. (2IRRC)**

Originally released in 1998, but reprinted in 2008, Brigadier-General McMaster’s expanded doctoral dissertation *Dereliction of Duty* is as topical a read today as it was when originally published. In a compelling manner, well researched and sourced, the author carefully develops his two primary theses. First, the Joint Chiefs of Staff, for a number of reasons—inter service rivalry, Executive promises of bigger budgets and responsibilities to name but two—abandoned their ethical duty to serve the nation, first by failing to advise President Lyndon Johnson and the Secretary of Defence Robert McNamara of the military unsoundness of McNamara’s proposed “graduated pressure” policy. Second, the Vietnam War became increasingly “civilianized” or “domesticized” whereby civilians, primarily the “whiz kid” assistants under McNamara, eschewed military advice, which they knew or cared little about, in

favour of putting the war on a business footing. The author concludes that "the Vietnam War was not lost in the field, nor on the college campuses, nor on the front pages of the *New York Times*, rather, it was lost in Washington almost from the beginning".

*Dereliction of Duty* relies upon secondary services, interviews with some of the principal parties and recently declassified material. McMaster, himself a front line armour officer, winner of the Silver Star and an instructor of military history at the Military Academy at West Point, drafts a damning indictment of those Generals and politicians who started a war they knew they could not win, at least not the way they were prepared to resource it. This powerful, but at times repetitious history, examines the period 1963-1966 and focuses on four critical decisions made by President Johnson, which had a profound impact on the administration's concept of operations for the war: the August 1964 Tonkin Gulf Resolution; the February 1965 decision to conduct air strikes in North Vietnam ("Rolling Thunder"); the March 1965 decision to introduce American ground troops into Vietnam, and finally, the decision in July 1965 to introduce substantial American forces without federalizing the National Guard. McMaster writes that Johnson was only interested in Vietnam as its impact affected his "Great Society" domestic legislative agenda.

He neither understood the war he was fighting or the enemy he was confronting, and he made no attempt to do so, relying, increasingly, on those individuals ill-equipped to properly advise him.

McNamara saw the escalating conflict and the consequential American response as a series of "communications" in which the U.S. would "signal" its resolve by graduated pressure. So, following the dubious Tonkin Gulf clashes a series of military strikes on the periphery of Vietnam's military power was commenced. When that failed to achieve a positive result, namely the removal of Hanoi's support for the insurgent Viet Minh forces, controlled bombing raids were planned. When North Vietnam did not disavow their military support, Johnson and McNamara reluctantly escalated the U.S. commitment by deploying ground forces, secretly admitting that they were fighting for a stalemate, which would lead to a more favourable future withdrawal. (The Korean War phrase "die for a tie" indicates that this was not a new strategy). What is perhaps the most shocking of all was the gradual politicization of the senior military management. That is to say, rather than resigning, or at minimum arguing against this dubious policy of gradual escalation,[1] the Chiefs abandoned their ethical responsibilities and accommodated themselves to the limitations imposed by the Executives, eventually becoming, as McMaster astutely notes, "the five silent men."

*Dereliction of Duty* is replete with a number of sub-themes: the "massaging" of military intelligence to fit with the perceptions of the Secretary of Defence and the President of the United States; the writing of military reports with predetermined conclusions and recommendations; the inability of the military leadership to understand that it was fighting a new kind of war and a new kind of enemy; and finally, the inability and unwillingness by the military to frame clear strategic objectives. In essence, there was no end game planned.

The book is not without its faults. The writing is ponderous at times. The author's strident language is problematic as it obscures what should have been a completely objective study of an important period in American history. The author's characterization of many of the book's principals is overly harsh and subjective. *Dereliction of Duty* does not offer any new ideas, concepts or evidence, and as such, does not contribute to the vast literature of the Vietnam War. It does, however, provide a valuable case study of the intersection of domestic politics and military strategy. It should be on the night stand of all commanders and politicians who believe wars can be fought in absolute isolation from domestic politics.

## Endnote

1. In Richard Gabriel's The Warrior Way: A Treatise on Military Ethics (2007), the author develops the thesis that the soldier's ultimate "duty" is not to his/her superiors but to the state. There are, in fact, the author asserts, limits to obedience. In the face of unethical orders, the soldier has four options: resignation/retirement; request for relief; appeal of order to a higher level of command; and, direct refusal to carry out the order. It is submitted that following a strategy which one knows will result in the unnecessary deaths in one's command is, at worst unethical, and at best unsound, conduct. The Chairman of the Joint Chiefs of Staff should have resigned.

## COMMENTARY ON THE ARTICLE "COURAGE AND REWARD IN THE WAR OF 1812," BY T. ROBERT FOWLER (CAJ VOL 11.3, FALL 2008, P 97–112).

**Major J. Grodzinski writes...**

First, the article gives the impression that the conflict was between the United States and Canada, which is simply wrong. The United States declared war on Great Britain, and while most of the fighting occurred in what became known as the Northern Theatre of Upper Canada, there were other significant actions along the American seaboard, the Gulf of Mexico and of course, on the high seas.

The territory of British North America did not only comprise Upper and Lower Canada, but also included all the Atlantic Provinces and Jamaica. As such, when the British raised units locally, either in the form of provincial, embodied and militia, they were drawn not only from the two Canadas, but Nova Scotia, New Brunswick and Newfoundland as well. Indeed, the Royal Newfoundland Regiment participated in some 13 battles or actions in Upper Canada, Michigan and New York States, while acting as marines on the Royal Navy Squadrons on Lakes Ontario and Erie.

The backbone of the defence of British North America lay with the British regular, a group that the Duke of Wellington did indeed call "the scum of the earth," at least long after the Napoleonic Wars in 1836; the second part of his commentary is often forgotten when quoted, where he also said "but what fine men we made them." It was the few regulars in 1812, well, some 9,777 of them (increasing to over 19,000 the following year and to 44,000 by 1814), that would be engaged in most of the fighting; these few regiments were literally worn out by their constant employment. The British strategy was a defensive one and it would not be until the fall of 1814, that the number of regulars stationed in and around North America would outnumber the US Army, at least on paper.

British discipline was brutal, at least by our standards, but it was also adjusted to the demands of a global war. An army cannot simply go about beating its soldiers into the ground and expect them to fight. So while flogging was often used, commanding officers found that public embarrassment was a far more effective for ensuring discipline. It may surprise some readers that the U.S. Army executed more soldiers for violations between 1812 and 1814, than Wellington's army in the Peninsula did, between 1808 and 1814.

What motivated soldiers of the period?—in most cases it was drink and money, rather than the abstract notions of regimental pride or duty. A soldier's ration included a daily serving of spirits and while on campaign, soldiers earned prize money. The 1813 Prize Books for the Niagara show that soldiers who survived the heady campaign of that year earned considerable money, well above their pay. One wonders what some chose to do with that money.

As for awards and honours, British officers could receive either the large or small version of the Army Gold Medal and the Order of the Bath. If they survived to the 1840s, then they could apply for the Military General Service Medal or the Naval General Service Medal, each of which offered a number of bars noting specific actions, some of them for the War of 1812, such as Fort Detroit, Chateauguay or Crysler's Farm. For those in the Iberian Peninsula or later at Waterloo, there were myriad Portuguese, Spanish, Hanoverian and other foreign awards as well. Finally, officers could also receive brevet promotion for honourable service or distinction in action.

There was little for the rank and file, save drink or money. One must consider the expectations of a soldier from this period, an age where honours and awards were few and

generally intended for a portion of the army. Those who fought in the Peninsula or who were at Waterloo also had the letters “P & W” placed by their names on regimental lists, which afforded them some prestige, occasional preference for promotion and additional funds. One must remember that after Waterloo, the war in North America was forgotten and as Sir George Prevost, the commander in chief of British North America, died in 1816, there was no senior officer willing to push for acknowledgement of the campaigns and battles of that conflict. This heritage was not helped by an administrative decision made many years ago in Canada to not acknowledge lineage or battle honours prior to 1855.

One looking for soldiers sporting rows of medals would be hard pressed however. One might see the odd Waterloo Medal, instituted in 1816, on some War of 1812 veterans, but that was about it, or at least almost it.

Regiments often took pride in the quality of their men and the officers in particular sometimes took steps to award service or valour on their own, giving birth to an unofficial system of awards and rewards. Thus a variety of regimental awards, often beautifully engraved silver medals, were presented to soldiers for specific acts. A soldier could also be acknowledged in dispatches, such as Private John Mitchell, for conspicuous gallantry on 27 May 1813, where following the defence of Fort George, he carried a wounded officer to safety and then walked sixty kilometres to rejoin his regiment near Stoney Creek. Occasionally officers would provide a gift of money to a deserving soldier. This is a fascinating topic that to date has only been covered in a single volume privately published in Britain.

Finally, one must be careful in discussing the officer corps of this period. Certainly, ranks within the infantry and cavalry were obtained by purchase (advancement in the artillery and engineers was by seniority), but by 1814, only 24% of serving officers gained their rank by that means. Most earned it the hard way. Furthermore, the growing middle class made up an increasingly larger portion of the officers corps, not just the aristocracy.

Did this vary from Canadian attitudes? Well, it would have been fun to be at Prescott during 1813 to hear Lieutenant Colonel Thomas Pearson, an officer of the 23rd Foot and veteran of a number of campaigns, chewing out a number of Canadian militia officers for their overbearing and aristocratic nature towards their men! Hmm, only in Canada you say? Pearson was so incensed, that his disgust was also reflected publically in garrison orders. When discussing class and culture of this period, there are no absolutes. Powder and queues were also out before 1812.