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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.

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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 www.army.forces.gc.ca/caj/.

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Opinions expressed in the articles remain those of the author and do not represent departmental or Canadian Forces policy. The doctrine, training, and other updates do not represent authority for action on that particular topic.

EDITORIAL

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THEORISTS VERSUS THINKERS—DOES IT MATTER?

Major A.B Godefroy, CD, PhD, plsc
Editor-in-Chief

Major Andrew B. Godefroy

Last year I was afforded a unique opportunity to critically examine the original writings of the military theorist Clausewitz, in what is perhaps one of the world's most enlightened and challenging academic forums. Coming away from this experience, I found myself, frankly, annoyed with the way his writings were routinely misinterpreted and misapplied by modern western militaries. Worse perhaps, I began to wonder seriously why this particular touchstone continued to have so much influence over the army's core approaches to military problem solving. Further branded by some of my own experiences with capability and professional development, I endeavoured to craft a somewhat purposely inflammatory critique of Clausewitz hoping to spark new debate on the subject. The article was subsequently published in the summer 2010 issue of the *Canadian Military Journal*.

Sadly, the article seemed to generate more interest outside of Canada than within it. Emails either congratulating or damning me arrived from colleagues in the British Army, and the Australian Army felt the article worthy enough to include it in their Senior Officers Professional Digest. Even Clausewitzian disciples in the United States appeared to take note. But at home there has been very little riposte to the easy target I offered up, which begs the question again why has Clausewitz remained seemingly so important to us?

The one interesting issue that did fall out of the cursory debate I was able to generate at home was the relative importance and influence of military theorists and thinkers to land warfare studies and capability development. There are those who favour the teachings of a small select group of theorists dominated by the likes of Clausewitz and Jomini, while

others see value in the broader analysis offered by a wider community that includes Callwell, Heneker, Fuller, Liddell Hart, Brodie, Khan, and the like.

Is one more useful than the other? Is there an imbalance or too much bias towards one school of thought in our own approaches? Are we in Canada even aware of our own military thinkers?

After a somewhat heightened debate over the nature and character of future land warfare in the army's publications at the turn of the century, the subject seems to have taken a back seat to other more tactically pressing issues. This is not to suggest that these other topics are less important, but it does leave one to wonder why less attention is paid to the first principles of warfare. In this issue's note to file, however, Lieutenant-Colonel (Ret) Roman Jarymoycz at least makes us think a bit more deeply about one aspect of the ever elusive subject—the operational art. Perhaps other readers might offer up newer insights still for future issues.

This issue of the journal offers a wide range of interesting articles examining broader subjects associated with land capability development as well as individual soldiering. The articles on soldier fitness by Dr. Tara Reilly and on gender integration by Second Lieutenant Martha Rzechowka, address topics that are often at the center of army debates, but less often the subject of an informed analysis in our journal. We were very pleased to receive them both. Likewise, I am particularly pleased to note that we continue to draw considerable interest and submissions from our allies, and this issue presents one of those offerings from Captain Dominic Bowen of the Australian Army. Likewise, I was pleased to see an increase in original French language submissions and want this to continue—our format makes it easy to translate articles into both official languages.

I am looking forward to hearing from our readers what they think of the new format, and I do encourage you to write us and tell us what you think. Until then and as always, enjoy the issue and look to making your own contribution!

ON THE EDITOR'S DESK…

As promised, some of the books I have noted here previously have now had reviews submitted to the books section at the back of this issue. Presently, I am finishing off Ian Kershaw's magnum opus simply titled, *Hitler*. At over a thousand pages, this biography of the villain is as much about the history of war in the twentieth century as it is about one man's nefarious influence over so much of it. If you were to ever read only one book on the subject, this should be your choice. Next in line on the desk is Major Mark Gasparotto's edited book, *Clearing the Way: Combat Engineers in Kandahar*, to be followed by Jon T. Hoffman's *A History of Innovation: U.S. Army Adaptation in War and Peace.* Both look to be good reads as well. As always, reviews of these books will appear in forthcoming issues.

Major A.B Godefroy, CD, PhD, plsc
Editor-in-Chief

COMMANDER-IN-CHIEF UNIT COMMENDATION

CITATIONS:

1st Battalion, Princess Patricia's Canadian Light Infantry Battle Group
Edmonton, Alberta

From January to August 2006, the 1st Battalion, Princess Patricia's Canadian Light Infantry Battle Group was engaged in almost continuous combat with a well-prepared and determined insurgent force in Afghanistan. During 29 major operations, the flexibility and remarkable cohesion shown by members of the battle group enabled them to overcome many hardships to suppress Taliban activity, to secure coalition forces' freedom of movement and to deliver humanitarian assistance throughout Kandahar province. The outstanding dedication and courage under fire displayed by these soldiers were instrumental in furthering peace and stability in this war-torn country.

1st Battalion, The Royal Canadian Regiment Battle Group
Petawawa, Ontario

During August and September 2006, the 1st Battalion, The Royal Canadian Regiment Battle Group played a decisive role in one of the largest ground combat operations in the history of NATO. Deployed to an area of Afghanistan with fierce enemy resistance and extremely difficult terrain, the members of the battle group resolutely defeated a well-coordinated insurgent force in the area surrounding Kandahar City. Succeeding where larger forces had failed, they prevented the enemy from realizing their goals of capturing the city and weakening international resolve and cohesion.

3rd Battalion Royal 22e Régiment Battle Group
Courcelette, Québec

From July 2007 to February 2008, the 3rd Battalion, Royal 22e Régiment Battle Group displayed outstanding courage and resolve while battling insurgents in Afghanistan. Arriving at a difficult time for coalition forces, the members of the battle group worked aggressively to regain the initiative from the enemy. They were instrumental in dismantling improvised explosive device networks, re-capturing checkpoints and returning them to Afghan control, enhancing the capacity of Afghan forces and providing guidance on community building and local governance. Their unrelenting efforts expanded the coalition's security presence and brought hope to the Afghan people.

MILITARY VALOUR DECORATIONS

Medal of Military Valour
Warrant Officer Michael William Jackson, M.M.V., C.D.
Vancouver and Abbotsford, British Columbia

Master Corporal Paul Alexander Munroe, M.M.V., C.D.
Stonewall and Swan River, Manitoba

In the midst of a three-hour battle in Afghanistan on August 19, 2006, Warrant Officer Jackson and Master Corporal Munroe's platoon was forced to conduct a withdrawal while under enemy fire. Fully exposed to the violence of the enemy, these soldiers risked their lives to coordinate the safe movement of personnel and damaged vehicles. Their heroic actions under constant fire enabled the platoon to regroup and continue the fight, while denying the enemy an opportunity to capture and make use of stricken Canadian equipment.

Medal of Military Valour
Master Corporal Jeremy Joseph James Leblanc, M.M.V.
Coalhurst, Alberta

On October 14, 2006, Master Corporal Leblanc's section was occupying a position in Afghanistan when insurgents unleashed a devastating attack that resulted in several casualties, including the death of his section commander. Seamlessly assuming command, he rallied his section to return fire while personally tending to the wounded. Despite being injured himself and under constant fire, he continued to lead and inspire his section to keep fighting and hold its ground against a determined enemy. His selfless actions no doubt saved the lives of some of his fellow soldiers.

MERITORIOUS SERVICE DECORATIONS

Meritorious Service Cross (Military Division)
Sergeant Joseph Martin Brink, M.S.C.
Sylvan Lake, Alberta

On January 15, 2006, Sergeant Brink demonstrated exemplary leadership as the section commander during an attack on his patrol convoy by a suicide vehicle borne improvised explosive device. He quickly established a security perimeter and sent a detailed report to command headquarters, which allowed for the rapid dispatch of the quick reaction force to provide assistance at the scene. He then entered a burning, overturned and ammunition-laden vehicle to render aid to a trapped and seriously injured soldier until that soldier could be safely extracted. Sergeant Brink's perseverance and performance under extreme duress were exceptional.

Meritorious Service Medal (Military Division)
Major Geoffrey Arthur Abthorpe, M.S.M., C.D.
Thunder Bay, Ontario

While deployed to Afghanistan from August 2006 to February 2007, Major Abthorpe was instrumental to the success of counter-insurgency operations in Kandahar province. As a company commander during intense combat, his sound tactical acumen and courage under fire enabled his company to seize and hold key terrain despite being isolated from the larger Canadian battle group and being in constant contact with the enemy. These daring independent advances helped secure the battle group's flanks and enabled a full-scale attack that defeated the enemy in the region.

Meritorious Service Medal (Military Division)
Petty Officer 2nd Class Barbara Agnes Benson, M.S.M., C.D.
Isle aux Morts, Newfoundland and Labrador

From 2007 through 2009, Petty Officer 2nd Class Benson demonstrated outstanding leadership and operational effectiveness while assigned to the Naval Ocean Processing Facility Whidbey Island, U.S.A. With her expertise and mentoring skills, she was able to transform her team members into top performers. Her leadership and training of multinational sailors significantly contributed to the success of the Facility and will have a lasting and positive impact.

Meritorious Service Medal (Military Division)
Major Timothy Charles Byers, M.S.M., C.D.
Belleisle Creek, New Brunswick

From May 2008 through March 2009, Major Byers exhibited professionalism, foresight and leadership in his capacity as commander 4th Canadian Ranger Patrol Group during the planning and execution of Exercise WESTERN SPIRIT. The exercise included an arduous 37-day snowmobile trek, during which he led the patrol through severe arctic conditions, highlighting the capabilities of Canadian Rangers in over 25 northern communities. The success of this Exercise and its connection with Canadians in the North brought great credit to the Canadian Forces.

Meritorious Service Medal (Military Division)
Chief Warrant Officer Robert Daly, M.S.M., C.D.
Lincoln, New Brunswick

Chief Warrant Officer Daly's leadership of a diverse group of people, combined with his expert advice to superiors and subordinates alike, ensured the success of the National Support Element in its mission to support troops in Afghanistan. Sharing the risks of combat logistics patrols with those he led, he set the example for them to follow and ensured the provision of logistics requirements to the units they supported. His efforts and perseverance directly contributed to the operational success of Canadian and coalition forces from February to September 2008.

Meritorious Service Medal (Military Division)
Chief Warrant Officer Patrick Joseph Earles, M.S.M., C.D.
Mount Pearl, Newfoundland and Labrador

Chief Warrant Officer Earles deployed to Afghanistan as regimental sergeant-major of the National Support Element, the logistics unit tasked with supporting the Canadian Forces in theatre, from January to August 2006. A courageous man, his inspired leadership and tireless example bolstered morale and confidence throughout the unit and inspired perseverance during a tour replete with difficult times for all concerned. Whether providing sound advice to his commanding officer or sharing the risk on the ground, Chief Warrant Officer Earles' leadership and dedication ensured the successful provision of logistical support across Afghanistan.

Meritorious Service Medal (Military Division)
Colonel Martin Girard, M.S.M., C.D.
Gatineau, Quebec

Colonel Girard was deployed to Haiti as the commander of Task Force Port-au-Prince from July 2008 to August 2009. Occupying a senior leadership role as the chief of staff to the United Nations force commander, he established relationships with key stakeholders that facilitated the operations of the international stabilization mission. His outstanding coordination of 7000 multinational soldiers and interaction with international aid agencies enabled an organized relief effort during Haiti's hurricane crisis, played a prominent role in supporting senatorial elections and led to the implementation of a quick-reaction force that quickly quelled rioting in the country.

Meritorious Service Medal (Military Division)
Sergeant Marie Renay Groves, M.S.M., C.D.
St. John's, Newfoundland and Labrador

Sergeant Groves has been the creator and motivator behind three projects: Notes from Home Campaign, Tour Diaries and Memory Books. Her efforts have been instrumental in forwarding written notes to the deployed soldiers, in documenting their personal experiences in Afghanistan, and in producing a personalized hand-crafted memory book for the families of every fallen soldier. Sergeant Groves has actively promoted the welfare of Canadian Forces members and their families and has garnered significant support from all Canadians, coast to coast to coast.

Meritorious Service Medal (Military Division)
Master Warrant Officer John William Hooyer, M.S.M., C.D.
Brantford, Ontario

Within the first six weeks of arriving in Afghanistan, Master Warrant Officer Hooyer's company was under near-daily attack from enemy mortars and had suffered numerous casualties. His outstanding leadership as the company sergeant-major kept his soldiers operationally focused during this challenging period, as well as during a large NATO-led ground offensive. Providing exceptional support to his company commander during intense combat, Master Warrant Officer Hooyer was instrumental to the success of Alpha Company from August 2006 to February 2007.

Meritorious Service Medal (Military Division)
Chief Warrant Officer Michael Raymond Lacharite, M.S.M., C.D.
Edmonton, Alberta

Chief Warrant Officer Lacharite was deployed to Afghanistan as the Kandahar Provincial Reconstruction Team's regimental sergeant-major from February 2008 to February 2009. His guidance enabled military support to civilian agencies and ensured their enhanced understanding of the military's mission, capabilities and culture. A stabilizing influence at Camp Nathan Smith, Chief Warrant Officer Lacharite forged an effective civilian-military team that advanced good governance and development in the region.

Meritorious Service Medal (Military Division)
Captain Tyler Lavigne, M.S.M.
Bathurst, New Brunswick

As the information management officer from November 2008 to April 2009, Captain Lavigne contributed to the concurrent establishment of the Joint Task Force Afghanistan Air Wing, the Canadian Helicopter Force Afghanistan and a Canadian unmanned aerial vehicle detachment. His innovative solutions and ability to balance competing priorities enabled him to implement multiple command and control systems in an austere environment. Captain Lavigne's leadership and professionalism ensured that units received the communications support necessary for the rapid commencement of flying operations.

Meritorious Service Medal (Military Division)
Corporal Derick Lewis, M.S.M.
Kings-Hants, Nova Scotia

On September 3, 2006, Corporal Lewis' company was advancing across the Arghandab River in Afghanistan, when it came under enemy fire from a defended position; they quickly incurred several casualties. While the fight continued around him, and despite being wounded, he assisted with the assessment, treatment and evacuation of the other casualties until his own injuries forced him to stop. Demonstrating exemplary perseverance and devotion to duty, Corporal Lewis continued in spite of his injuries and helped save the lives of his fellow soldiers.

Meritorious Service Medal (Military Division)
Major Martin Andre Lipcsey, M.S.M., C.D.
Ottawa, Ontario

During a large NATO-led ground offensive, Major Lipcsey was pivotal to the planning and execution of complex brigade and battle group operations in Afghanistan, from August 2006 to February 2007. His tactical acumen, soldiering ability and combat leadership ensured ongoing success throughout high intensity battles. Major Lipscey's command presence and professionalism directly contributed to the operational success of the battle group and reinforced Canada's reputation as an effective fighting force.

Meritorious Service Medal (Military Division)
Captain Steven E. Luce, M.S.M. (United States Navy)
Cleveland, Ohio and Las Vegas, Nevada, United States of America

From 2006 through 2009, Captain Luce demonstrated outstanding professionalism and initiative in his duties as the United States naval attaché to Canada. His contributions to a number of Canadian Forces programs and projects—most notably the Canadian Submarine Program, the Joint Support Ship Project and the Arctic/Offshore Patrol Ship Project—were invaluable to Canadian naval operations and significantly enhanced co-operation and relations between Canada and the United States.

Meritorious Service Medal (Military Division)
Major Gilbert Joseph William McCauley, M.S.M., C.D.
Sherbrooke and Gatineau, Quebec

In response to a series of incidents that severely disrupted Canada's aerial surveillance capability in Afghanistan, Major McCauley was deployed on short notice to Kandahar Airfield in June 2008. Assuming temporary command of the Tactical Unmanned Aerial Vehicle Detachment, he strengthened the unit and set the conditions for its ongoing viability. He later assumed full command of the unit and ensured that its members continued to provide exceptional support to the task force until September 2008. Major McCauley's leadership and technical knowledge ensured the delivery of critical intelligence and surveillance information to Canadian Forces in Afghanistan.

Meritorious Service Medal (Military Division)
Chief Warrant Officer Mark Henry Miller, M.S.M., C.D.
Minto, New Brunswick

From December 2006 to February 2007, Chief Warrant Officer Miller rose to the challenge of replacing the battle group's regimental sergeant-major, who had been killed in combat. Arriving in Afghanistan on short notice and without the benefit of full deployment training, he immediately found himself involved in intense combat. Throughout this battle and during all subsequent operations, his frontline leadership maintained the battle group's fighting spirit. Chief Warrant Officer Miller's ability to quickly and tactfully assume his responsibilities and establish his presence ensured the unit's continued operational effectiveness.

Meritorious Service Medal (Military Division)
Master Warrant Officer Robert Joseph Montague, M.S.M., C.D.
Ottawa, Ontario

From August 2006 to February 2007, Master Warrant Officer Montague's efforts as the artillery battery sergeant-major contributed to the operational success of Joint Task Force Afghanistan. His leadership skills were key to the successful handling of many stressful situations, such as the extraction of a trapped vehicle while engaged with the enemy or the coordination of the delivery of thousands of rounds of artillery and mortar fire by Canadian and coalition gunners. He was instrumental in the success of enemy engagements during major Canadian and NATO-led operations.

Meritorious Service Medal (Military Division)
Major Steven John Vincent Nolan, M.S.M., C.D.
Whitby and Scarborough, Ontario

Major Nolan was deployed to Afghanistan as a mentor to the commanding officer of an Afghan National Army infantry battalion from September 2008 to April 2009. During multiple combat operations, he provided frontline mentorship to his Afghan counterpart, enabling him to succeed in a chaotic environment while under fire. Whether operating independently or with coalition units, his mentorship promoted the development of sound operational plans and successful schemes of manoeuvre. Major Nolan's outstanding leadership and professionalism were instrumental to the Afghan battalion's operational success.

Meritorious Service Medal (Military Division)
Corporal Curtis J. Stephens, M.S.M.
Victoria, British Columbia

On May 16, 2008, Corporal Stephens' patrol was attacked by a suicide bomber in Zhari district, Afghanistan. With his sergeant among the wounded, he assumed command and led his section through a successful engagement and eventual return to its post. While still in charge six days later, his tactical skill and command presence were instrumental in another engagement with insurgents. Working at a level well above that expected of his rank, Corporal Stephens' exemplary combat leadership inspired his section and enabled their operational success.

Meritorious Service Medal (Military Division)
Lieutenant-Colonel Duart Paul Townsend, M.S.M., C.D.
Toronto, Ontario

As project director, Lieutenant-Colonel Townsend led the team responsible for fielding the interim medium lift capability for operations in Afghanistan, the goal of which was to reduce reliance upon ground movements and their inherent risk from ambush. A proactive leader with unequalled mission focus, he overcame many obstacles and unexpected challenges, enabling the successful and timely delivery of Chinook helicopters to the Canadian Forces.

Meritorious Service Medal (Military Division)
Sergeant Christopher Stuart Whalen, M.S.M.
St. John's, Newfoundland and Labrador

Sergeant Whalen showed leadership and devotion to duty in his capacity as commander of the Care of the Wounded Soldier Cell for the 2nd Battalion, Princess Patricia's Canadian Light Infantry, from July 2006 to January 31, 2010. As a wounded soldier himself, he was an effective advocate for the rights, entitlements and medical needs of the injured. In addition, he made valued contributions to numerous national-level advisory groups on the subject. Sergeant Whalen's efforts have brought great credit to the Canadian Forces.

Source: Combat Camera

Source: Authors

BUILDING THE ARMY'S INTELLECTUAL SOUL: THE EVOLUTION OF THE FORT FRONTENAC LIBRARY

Major A.B. Godefroy and D. Willis

Shortly after the end of the Second World War, the Canadian Army relocated its staff college from the Royal Military College to Fort Frontenac, Kingston, where it was joined soon after by the newly created National Defence College (NDC). In 1946, a new library was also founded at the Fort to provide advanced research support for these two courses. Simply called the Fort Frontenac Library (FFL), it began its collection development largely through donations from the college's first postwar staff and students. Army legends such as Guy Simmonds, Andy McNaughton, George Kitching, John Rockingham, Jacques Dextraze and others all left personal notes, staff college exercises and books to the new library, creating a unique and nationally important foundation upon which the collection has since grown.

Image provided by authors

As the library evolved, the demands for its support increased as well. In addition to serving the needs of the NDC (until its closure in 1994) and the newer Canadian Land Force Command and Staff College (CLFCSC), the library witnessed an increasing number of academic, scholarly, student, and professional visitors as well. The reason they were coming to the FFL was straightforward. Nowhere else in the country could one find such a rich and focused collection of sources dedicated to the study of land warfare, and more specifically, to the study of Canada's Army.

Currently housing over 100,000 items and continuing to grow daily, the library possesses a strong collection of primary source documents on the legacy of the army's conceptual and doctrinal design evolution; unique personal memoirs, records, and materials from six decades worth of soldiers and scholars; thousands of volumes dedicated to military art and science, land operational research, military history, war studies, as well as a wide range of ancillary topics. In addition, the library carries the latest journals dedicated to land warfare studies, building on its already existing collection which includes holdings dating back as far as the mid-nineteenth century. In the rare books collection, researchers may find volumes dating back to the eighteenth century—the library includes over a thousand volumes published before the year 1900.

The FFL has a mandate to collect and preserve the army's intellectual legacy as a cultural resource for all. In the pursuit of that goal, it acts as the primary repository for the archives of CLFCSC and the *Canadian Army Journal*, as well as for materials from a number of other land force development organizations. In addition, the library has recently undertaken a major legacy project known as the Land Forces Capability Development Collection and Archives. This collection seeks to include, among other items, a hardcopy of every single conceptual, operational research, doctrinal, and training document and manual ever produced by the Canadian Army since confederation. Finally, as the most widely recognized military library in Kingston, the FFL enjoys regular donations of books and other primary source materials from soldiers and veterans in the area.

CURRENT OPERATIONS AND FUTURE EVOLUTION

Today the library serves approximately 6000 research requests and loans annually, a tremendous challenge for its small but highly professional and dedicated staff. In addition, there is an ongoing demand to access, catalogue, bind, preserve and repair volumes, journals and materials. Such important tasks require both personnel and resources that are constantly being chipped away at these days, making it vital that the Army's intellectual soul continues to receive the dedicated support it has from the Land Force's senior leadership.

Image provided by authors

As with many intellectual foundations, the FFL benefits from a wide range of additional support from soldiers, patrons and other volunteers. This constantly growing community has added much needed stimulus to a number of projects, making it possible for the FFL to continue growing its nationally important collection as well as providing first-class service to the Army.

Still, there is much that all ranks of the Army as well as those who are interested in any and all aspects of land warfare studies and the Canadian Army's history can do to help. First and perhaps most important, is the support of the library's collection development through donations. The FFL is always seeking to obtain copies of regimental and branch/corps histories, operational tour books, newsletters, and journals, as well as locally produced yearbooks and materials. All Commanding Officers and Task Force Commanders are encouraged to donate copies of their histories and operational summaries to the FFL, as well as any other materials of interest for land warfare studies research. In addition, the library gladly accepts book donations, whether a single volume or whole libraries. The FFL can create special collections for large subject specific private collections.

Today, the Fort Frontenac Library is a key institution that the whole Army may take pride in. And armed with a clear mandate, tremendous senior leadership guidance and support, as well as a developed campaign plan and sound strategic management, the library will continue to evolve as the Canadian Army's intellectual foundation and legacy for many decades to come.

Image provided by authors

GET TO KNOW THE FORT FRONTENAC LIBRARY

The FFL exists to preserve the Army's intellectual legacy for all ranks of the Canadian Army, as well as the nation writ large. Everyone is encouraged to get to know the library and its staff. Details on how to get in touch and explore the resources available are as follows:

SERVICES

The FFL offers reference services and assistance with research questions to the army and the Canadian Forces across the country. In addition, we offer an inter-library loan program that provides distance services to those not in our immediate vicinity.

VISIT US ON THE DIN

Under Land Force Doctrine and Training System: http://lfdts.kingston.mil.ca/main_e.asp Scroll down to Fort Frontenac Library on the right hand side of the screen click on this and when you reach our home page click on Search Fort Frontenac Library. You will then be presented with a Dynix search screen which will allow you to search the collection in a number of ways.

Image provided by authors

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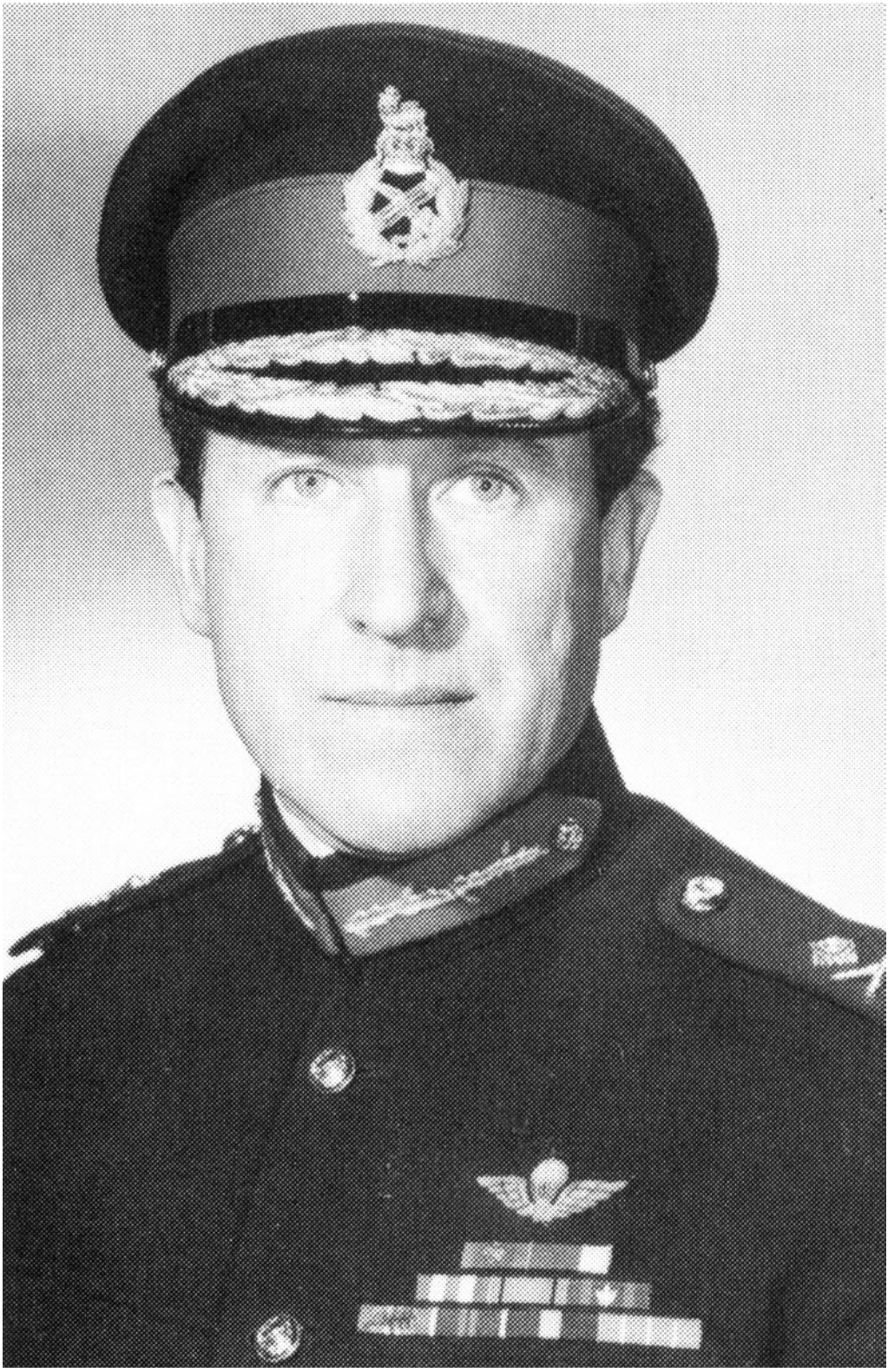


Major-General Roger Rowley, DSO, ED, CD

THE ROWLEY REPORT AND THE CANADIAN ARMY STAFF COLLEGE[1]

Colonel H.G. Coombs, PhD and R. Wakelam, PhD

The past year marked the fortieth anniversary of the 1969 publication of the *Report of the Officer Development Board*. Also known as the *Rowley Report*, after Major-General Roger Rowley the chair of the study, this document was, and remains, an influential holistic model of a Canadian military professional education system that is founded on the needs of the profession of arms in Canada.

The remarks of the Chief of the Defence Staff of the day, Jean-Victor Allard, in the Report's foreword captured and continue to signal the importance of a well-founded professional education strategy. He wrote: "It matters little whether the Forces have their present manpower strength and financial budget, or half of them, or double them; without a properly educated, effectively trained, professional officer corps, the Forces would, in the future, be doomed to, at the best, mediocrity; at the worst, disaster."[2]

While the *Rowley Report* is little known by other than military educators, it provided analysis and recommendations pertaining to professional education that endure today.[3] However, also unheard of, but of note is the likely impact that Rowley's experiences, as Commandant of the Canadian Army Staff College (CASC) between 1958 and 1962, had on the formation of this seminal report.[4] This paper looks at the demanding nature of the military profession in the late 1950s, which was shaped by the increasing complexity of integrating nuclear warfighting concepts into the professional knowledge. At the same time, senior leaders had to understand the concepts and implications of peace operations, a doctrinal focus that was most strongly expounded in Canadian doctrine and curriculum. And the keystone above all of these was the complex interface between civilian direction and military execution. Rowley had to master all of these and then ensure his curriculum taught the right lessons and established the right professional values.

Prior to the Second World War, a limited number of Canadian officers had attended Imperial staff and defence colleges, although larger numbers had taken truncated forms of staff education in Canada. In 1940 the shortage of vacancies on British staff courses prompted the Canadian Army to create a short wartime course to educate officers in the knowledge and processes needed to function as staff and leaders in an expanding military organization. The first iteration was conducted in England, with the remainder of these courses being conducted in Canada, at the Royal Military College of Canada (RMC). During the same period some officers attended British and other courses.[5] After the war, CASC was established at Fort Frontenac in Kingston, Ontario and continues to this day as the Canadian Land Forces Command and Staff College (CLFCSC). CASC and its successor have shaped curricula and teaching to ensure that junior and mid-level officers receive education in the competencies required to command and administer army organizations, in war and peace. Prominent Canadian military historian John English has affirmed that this army staff college has been of vital importance to the maintenance of the army's military expertise.[6]

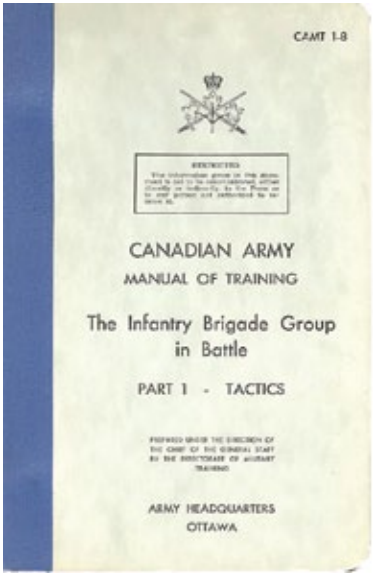
In 1966, at the time of integration of the Canadian services, the Canadian Forces College (CFC) in Toronto was established as an amalgamated Canadian staff education institution. The creation of the CFC was a precursor to the unification of the Canadian military in 1968 from distinct services to a single entity, the Canadian Forces (CF). As a result, the new CFC not only took on custodianship of the professional education[7] of the Royal Canadian Navy, Canadian Army and Royal Canadian Air Force, but also became responsible for educating and training future staff officers of the CF.[8] For Canadian Army officers, specifically, this meant that the CFC took ownership of CF curriculum pertaining to large scale military activities, including the organization of military operations in pursuit of national goals during conflict. This new institution was founded on the grounds of the former Royal Canadian Air Force Staff College, in Toronto, and the curriculum records and miscellaneous papers for CFC from its inception onwards are housed in the College archives. While other allied learning institutions existed, it was these colleges, CASC/CLFCSC and CFC, which provided the bulk of Canadian army staff officers

the education to deal with the duel dilemmas of military employment and organizing warfare in the late twentieth century. The *Rowley Report* addressed the exigencies of this newly integrated staff education.

For the Canadian Army, the Second World War had provided the demarcation between the Imperial perspective of the pre-war period and the creation of a distinctly Canadian paradigm of education arising from the crucible of that conflict. In 1959 the CASC course was lengthened from one to two years to meet the evolving needs of the Army in the modern age. In 1965, however, as a result of initiatives to integrate the three services into a single unified "Canadian Forces" the two-year CASC programme was reduced to its original length of one year in order to align it with the Royal Canadian Air Force staff course, upon which the new tri-service command and staff curriculum would be based.

The two-year CASC programme represents the zenith of Canadian Army staff education and was implemented under the guidance of Rowley. One could suggest that the focus and conduct of the professional development review Rowley chaired as a Major-General less than a decade later and the resultant *Report of the Officer Development Board*, promulgated in 1969, was influenced by this period. Consequently, an examination of Rowley's time in Kingston provides valuable context to his chairmanship of the Officer Development Board, its findings and legacy.[9]

The CASC of the late 1950s was an intellectually vibrant institution that not only provided senior officer professional military education, but also tested and developed new ideas for the Canadian Army. Through the guidance provided in its Annual Training Directives, the Canadian Army used the intellectual capabilities of CASC to develop its vision of contemporary warfare through educating its selected senior officers and establishing discourse with the Canadian Army Headquarters.[10] CASC was charged with examining proposed military structures and their usage in the context of modern military operations using discussion, debate and exercises.[11] This concept development work focussed mainly on the realms of organizational design and doctrinal innovation. These new ideas were then incorporated into the learning activities where, in an effort to be "forward-looking," course design included considerations to balance exercise scenarios between current and future war, using contemporary and possible future equipment.[12]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CANADIAN ARMY
MANUAL OF TRAINING

The Infantry Brigade Group in Battle

PART 1 - TACTICS

ARMY HEADQUARTERS
OTTAWA

This role extended to the development of doctrine. Until the 1960s no formal Canadian Army tactical doctrine existed, and as a result, CASC used a body of material that was known as "Canadian Army Staff College Future Doctrine." While neither validated through war nor training, this doctrine represented the knowledge and experience of the College staff who contributed to it. However, with the introduction of "official" Canadian doctrine in 1958, this provisional doctrine was superseded. Publications (such as *The Infantry Brigade Group in Battle* and *The Corps Tactical Battle in Nuclear War*) plus approved operating procedures (involving tripartite agreements by American, British and Canadian representatives) eventually replaced the CASC Future Doctrine.[13]

In the midst of this intellectual ferment, the first significant changes to the post-Second World War educational experience offered by CASC began to take shape. In 1958 the Canadian Army's Chief of the General Staff, Lieutenant-General Howard D. Graham,[14] sought "approval in principle" from the Minister of National Defence, Major-General (Retired) George R. Pearkes,[15] for a lengthening of the course from one to two years. This proposal was a result of the perceived necessity to introduce curriculum dealing with concepts of modern war, the major additions being nuclear warfare and new weaponry.

These changes in warfighting had led Graham to conclude that the CASC students needed more "time for study and serious thought to prepare them for the many varied staff appointments they may be called upon to fill in overseas theatres at joint or combined headquarters as well as field headquarters in Canada and at headquarters involved in aid to civil authorities." Accordingly, Graham proposed to double the CASC staff programme of studies. Pearkes, an educated and experienced former military professional, concurred with Graham's proposal.[16]

The idea of conducting this two–year programme had not emerged suddenly but in fact had been under examination for a number of years. Returning to Canada in 1953 after his assignment in Korea as a brigade commander to become the Commandant of CASC, Brigadier Pat Bogert wrote in the 1957 edition of the CASC journal, *Snowy Owl*, "the major change in the course has been brought about by the introduction of nuclear warfare." He then went on to specifically lay out that these changes centred on incorporating all the attendant changes to war that this radical shift in weaponry had produced.[17] Soon afterwards, after five years at the Staff College, a newly promoted Major-General Bogart departed for another command and was replaced by Rowley.[18]

Rowley further explored the breadth of the change in the 1958 edition of the *Snowy Owl*, which was promulgated after Pearkes' approval of the curriculum changes. Rowley described the process that had prompted the reorganization of the course as having been measured and inevitable:

> *The introduction of these changes has occurred over the past few years, keeping pace with the development of ideas on future war. The result has been a gradual accumulation of new material in the curriculum, while instruction on the old conventional aspects of war remained almost unchanged.*[19]

He went on to describe the course as having evolved into three primary subject areas: staff skills, non-nuclear operations and now nuclear operations.[20]

The topic of "staff skills" included producing formal analyses of military problems (or "appreciations"); creating formal orders and instructions pertaining to all aspects of military operations; and additionally, studying the interrelated matters of organizational structures, equipment and capabilities. Non-nuclear operations encompassed those aspects of the post-war programme of study that had remained unchanged. Lastly, the largest course alterations were reserved for the study of nuclear operations. In a similar fashion to conventional operations, all aspects of nuclear conflict and its associated administration were scrutinized. Of particular note were the attendant technological and procedural changes, such as "battlefield surveillance, target acquisition and analysis, the use of army air forces in the tactical area, the perils of electronic counter measures, the use of automatic data processing machines to assist in control of the battle; and a multitude of new and complicated techniques and processes."[21]

Rowley stressed that the move to a two-year programme was timely as there were other changes afoot in the Army. These shifts pertained to the restructuring and reassignment of roles for various military units as a result of the possibility of nuclear conflagration. In 1959, regular and militia units of the Canadian Army were reorganized in such a fashion as to be able to provide mobile support to devastated areas. From Rowley's perspective, connected with this modification to the Canadian Army were the changes to the CASC staff course.[22]

In addition to the injection of material relating to nuclear war, there were further structural and content changes to the course. Rather than what were formerly known as "tutorial" periods, the course was now organized into three much longer "semesters" spread over two years, with the first iteration of these semesters running from September 1959 until completion of the first two year syllabus in June 1961.[23] As an aside, the term "tutorial" later returned and is still in use; one can reasonably speculate that the name change may have represented an abortive attempt to break with past terminology thereby signalling a revised programme of professional education.[24] The first semester of the new course included lessons on the mechanics of a theatre of war—the organization, roles and employment of Army organizations—in addition to staff procedures. Next, the second semester used the knowledge gained in the previous

months to address tactical problems for brigade and divisional formations in all parts of conflict and "situations short of war." This semester also included curriculum dealing with the collective training of larger military organizations and the provision of support to civilian authorities. Finally, the third semester focused on corps and higher formations, their military activities and the logistical support required. Additionally, the joint employment of the Canadian Army with other Canadian services as well as combined operations with other nations was examined. On top of this, considerations for specialized operations (like parachute, air transported and amphibious roles and United Nations [UN] or other collective agreements) were discussed and practiced.[25]

There were a number of breaks over those three semesters: Christmas 1959, Easter 1960, Mid-Course (August 1960), Christmas 1960 and Easter 1961. While the traditional syndicate system of small group discussions and problem solving was kept, there was more time allocated for self-study and reflection.[26] Furthermore, the original aim of staff education was modified slightly from solely wartime contexts and expanded to include the idea of preparing an officer "for all branches of the staff *in peace and* in war."[27] Rowley believed that Canadian Army officers needed to be prepared for complex international and national security environments, and he articulated that sentiment to the Army Headquarters prior to the commencement of the 1959 CASC course:

As Canadian Army formations are assigned by NATO [North Atlantic Treaty Organization] to NORTHAG[28] [Northern Army Group, Central Europe] it is essential that the student should not only understand the theatre structure and the elements which support tactical formations but also emphasis should be placed on teaching the staff functions at brigade group, division, corps and Army level. In the opinion of the College, it is essential to provide Canadian staff officers with the background which will fit them for the growing number of NATO, UNEF[29] [United Nations Emergency Forces] and other pact agreements. In addition the staff officer who is being trained in peacetime must have a basic knowledge of the relationship between Government and the Armed Forces and the impact of scientific development on the nature of war.[30]

In 1962, at the end of Rowley's tenure, the original aim was amended to a broadly encompassing, "To prepare officers for all branches of the staff and with further experience for command."[31]

It would be erroneous to believe that CASC ignored the more traditional concepts of organizing military forces for conflict in order to embrace "softer" uses of military power, even with the inclusion of UN and domestic operations.[32] In fact, CASC was still very much oriented towards preparing Canadian Army staff officers for war.[33] But the necessity of educating these same officers for "peacetime responsibilities" could not be overlooked, and because of that, it was necessary to teach non-operational administration as well as national and international affairs.[34] While both the American and British Army staff colleges at Fort Leavenworth and Camberley addressed these types of topics in their curriculum, it was the explicit acknowledgement that there was a dimension to educating army staff officers not only for war, but also peace, that made this Canadian goal different.[35] Some of these issues became part of the dialogue between military practitioners that had marked curriculum development of CASC since its inception. For example, in 1959 Lieutenant-General S. F. Clark,[36] Chief of the General Staff for the Canadian Army, noted to the Vice-Chief of the General Staff, Major-General (later General) Jean V. Allard,[37] that he believed ". . . in general our staff officers do not have sufficient training in the production of budgets and the management of expenditures."[38] Clark was concerned that staff officers did not understand Army financial process or the monetary implications of their proposals; in this he was very clearly acknowledging that there were management issues, important to the viability of the Service, which could not be ignored. Allard later replied to Clark that the Commandant of CASC, Rowley, would examine the issue, prepare a recommendation and provide it to the Army Headquarters.[39]

Despite these many changes, warfare remained connected to traditional interpretations that would have been familiar to Helmuth von Moltke (1800–1891) and the Prussian-German military school.[40] The various interpretations could be seen to have their origins in the works of Carl von Clausewitz (1780–1831), whose military theory underpinned many of the teachings at Kingston, Leavenworth and

Camberley. Clausewitz posited that warfare had a number of different forms, ranging from extreme violence and destructiveness to limited conflicts. But in any case, the object of war and use of military force was to serve the policies of the state: "The political object—the original motive for the war—will thus determine the military objective to be reached and the amount of effort it requires."[41]

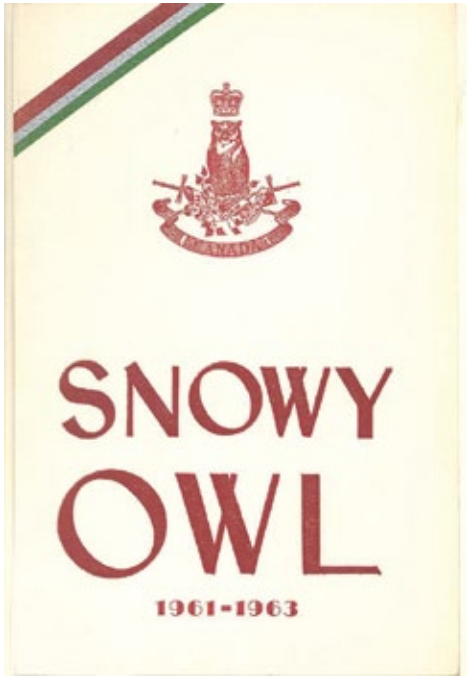
CASC put forward that warfighting would take place under three sets of conditions: general war, limited war and situations short of war. General war involved the use of nuclear weapons and attempts to destroy an opponent's military forces and capacity to make war. It would likely take place between the American-affiliated bloc of western nations and the Soviet-aligned states. In comparison to this unrestrained strategy, limited war would be waged with restricted force for specific objectives. It was suggested that limited war could conceptually be conducted with the employment of low-level or tactical nuclear weapons for clearly defined goals, and even if nuclear weapons were not used, there would still be an ever-present threat of their utilization as long as one or more sides possessed them. Only if a limited war did not involve nuclear arms, or the threat of their use, would it have the potential of remaining a non-nuclear or conventional war. Finally, situations less than war involved the deployment of UN forces to conflict regions to prevent either limited or general war from occurring.[42]

This Canadian shift to include nuclear and non-nuclear war within the curriculum mirrored adjustments at the United States Army Command and General Staff College (USCGSC). In justification of the new arrangements, Rowley suggested that any criticism which might arise concerning Canadian curriculum could be explained using the same approach as the American college. There Major-General Lionel C. McGarr, Commandant of the USCGSC (1956–1960), noted after similar curriculum changes the importance of these alterations: "Our chance of progress, our very hope of survival lies in moulding the minds of our leaders in the direction of progress."[43] Interestingly, the 1958 syllabus from the British Army Staff College does not demonstrate the same focus on nuclear warfare as CASC or USACGSC, although aspects of that topic were part of the primary curriculum.[44]

From the various curricula, it is evident that the changes to the CASC staff course in 1959 reflected greater American than British influence, and the strength of these connections was evidenced within the pages of the *Snowy Owl*:

> *Since 1940, cooperation in defence matters has been one of the outstanding aspects of Canada's relationship with the United States. Of particular interest is the fact that close ties have developed between the Staff Colleges of the two armies. Evidence of this has been seen by the present course at Fort Frontenac in the form of instructional material and exercises, exchange of Directing Staff and guest speakers.*[45]

Despite the transnational impact of concepts of professional education originating with the United States Army, CASC acknowledged within its curriculum a continuing relationship with the British Army. In accordance with NATO agreements, and the experience of the First and Second World Wars, it was expected that in the event of nuclear war Canadian Army formations would primarily fight within the framework of larger British military forces. As a result,



CASC developed an order of battle for Staff College exercises that had Canadian formations integrated with the British Army, while at the same time being able to work within other allied forces. To that purpose, the integration of various specialized British and American units was practiced.[46]

It is also noticeable that the influence of American forces within this the area of allied operations continued to grow. United States Army units gradually replaced British Army units within various exercises, and the United States Marine Corps supplanted British marine forces for amphibious operations. Also, American methods of "automatic data processing" in the realms of military intelligence and administration were introduced.[47]

At the same time, CASC did cultivate a uniquely Canadian perspective on conflict, insofar as neither Leavenworth nor Camberley explicitly retained within their course objectives the idea of preparing an army officer "...*in peace and* in war." The former expressed its aim as: "To prepare selected individuals of all components of the Army to perform those duties which they may be called upon to perform in war. The emphasis is on the art of command."[48] The latter institution provided a similar objective: "to train officers for war and in doing so fit them for second-grade Staff employment and with further experience for command."[49] The deliberate acknowledgement that the CASC curriculum addressed those aspects of military operations that Canadian Army officers would be involved in short of war demonstrated an awareness that the military was but one federal institution of a number contributing to national power and that staff education was not limited to educating for professional employment during war.[50]

Nevertheless, while CASC taught officers how to organize theatres of war, it did not offer instruction on the intellectual processes or connections between warfare and military or political strategy. While it was explicit that staffs needed to understand the intricacies of military activities in an extended region of conflict (like North-West Europe during the Second World War), the relationship of these operations to higher strategic objectives was neglected. Instead, the focus of CASC was on the conduct of war within a theatre of war to achieve immediate military objectives instead of longer-term objectives connected to alliance or national goals.[51] It was evident that this was a concern to the leadership of the Canadian Army. When the Vice Chief of the General Staff, Major-General Allard, was briefed on the new programme in September 1959, he questioned ". . . whether studies would include examination and debate of the use of war as an instrument of national policy . . . ." The minutes from this meeting record that the answer from Rowley was ". . . that this type of study would be part of the programme of reading and essay writing which would be included in the course." One can surmise that because the topic was not being dealt with as a separate theme within the curriculum the art and science of strategy formulation would not be explored in great detail.[52] Significantly, this shortcoming was later clearly identified in 1969 by the *Rowley Report*.[53]

Despite the lack of structured curriculum for this issue, one graduate of the 1959–1961 course, Captain (later Major-General) D.G. (Dan) Loomis, articulated his vision concerning the influence of the overarching objectives of strategic direction and national non-military activities on the armed services in a *Snowy Owl* article entitled, "Strategy, Operations and Tactics." In a cogently structured paper, Loomis put forward a framework that integrated aspects of contemporary strategy formulation. He noted that ideas of strategy and its composite parts were ill-defined, thus contributing to misunderstanding and confusion. Loomis argued that strategy encompassed all four facets of a nation's power and that these were: economic, diplomatic, psychological (ability to influence individual minds) and military. He then went on to argue that tactics were the detailed application of one of these elements, most typically a military engagement between opposing forces. Between tactics and strategy existed the realm of "operations," which were complex and large-scale activities that involved two or even three of the national instruments of power. Also, Loomis separated the idea of "politics" from strategy by defining politics as comprising actions that were normally within the legal authority of a government and peaceful in nature, while strategy related to government involvement in issues that were outside its normal control and that could involve the use of force. In effect, politics referred to national activities and strategy contained all international actions. Even with this partition Loomis suggested that politics also contained all of the same elements, but did not include the terminology of "operations" or "tactics"

because speaking of "economic operations" or "psychological tactics" would make no sense in a normally peaceful domestic environment. While a convenient division between domestic and external commitments, this argument, nonetheless, demonstrated a lack of clarity regarding the exact relationship between the military and government in the formulation of military strategy in either sphere.[54]

Throughout the 1960s, this critical link between government direction, or policy, and military activity at any level of conflict continued to be imprecisely understood by both junior and senior military officers. The *Snowy Owl* provides more evidence of this through other articles that were selected for publication. One such was Major K. H. Boettger's article "Types of Strategic and Operational Papers in Military History." He did not emphasize the oversight provided to military operations by national or alliance strategy, but did make mention of guidance provided by the Prime Minister of Britain, Sir Winston Churchill, to his military commanders in one short note: "Eminent examples of Anglo-American documents in this field [strategy] are: Winston Churchill's three famous 'Papers' of December 16, 18 and 20, 1941 . . . ."[55] The remainder of the article then focused on the various historical examples of western military guidance produced by military commanders for military forces, these lacking any more reference or connection to higher objectives.[56] Many of the examples had Prussian or later German provenance, unsurprisingly as Boettger was a German student at CASC as well as a Second World War veteran like many of the students of the period, albeit of the *Wehrmacht*, or German Army.[57] Boettger's illustrations were imbued with a sense of independence from civilian control during warfare. This militarized perspective of hostilities had developed during the German wars of the late nineteenth century. After the Prussian victories of that period, Von Moltke argued that while the beginning and ending of conflict resided in the sphere of diplomacy, the conduct of warfare needed to be free from unclear political interference in order to achieve its objective in the most decisive and expeditious fashion:

> *Diplomacy avails itself to war to attain its ends, crucially influencing the beginning of war and its end. It does the latter by reserving to itself the privilege of raising or lowering its demands in the course of the war. In the presence of such uncertainty, strategy has no choice but to strive for the highest goal attainable with the means given.*[58]

In other words, the key to success was military action unfettered by restraints outside the confines of the military profession. It is a vision of conflict that shaped the wars of the twentieth century to violent extremes in a search for decisive victory.

This intellectual exchange took place at the same time as governmental debate about structural transformation to Canada's three military services. The Minister of National Defence during this period, Paul Hellyer, notes in his memoir, *Damn the Torpedoes: My Fight to Unify Canada's Armed Forces*, that discussions pertaining to integration had already been initiated within Canada's military and cites the *Snowy Owl* as providing a supporting point of view:

> *The idea of a single service was not new, and its proponents were not all "armchair strategists[.]"...It had been proposed by significant numbers of serving and retired officers of all ranks. Captain J. G. Forth, Royal Canadian Engineers, had published an excellent paper entitled "Unification—Why, How, When" in the Canadian Army Staff College Journal 1959–1961.*[59]

The thinking of a student on the first two-year course, this was exactly the sort of student project that Rowley had indicated could be undertaken to give form to thinking about strategic issues.

The arguments pertaining to military amalgamation were not confined to the pages of the *Snowy Owl*, and in the early 1960s, this discourse expanded to deal not only with combining the three services but also their professional education systems. It was understood that unification would create staffs that contained naval, army and air force officers; officers who needed an understanding of integrated or joint operations. Accordingly, in December 1964 the Vice Chief of Defence Staff directed that a study be conducted "to determine the staff officer training requirements for the services with the object of introducing an integrated staff course in September 1966."[60] However, and more importantly for CASC, he also directed: "As an interim measure pending the development of an integrated staff training

programme, the two year staff course at the Canadian Army Staff College would be reduced to a one year course effective 1965."[61] On 26 January 1965, a conference was held at Kingston to examine the manner in which this investigation would be conducted.[62] At that time, CASC advocated strongly for a continuance of Army staff education of two years duration.[63] Indeed, at the end of the first two year course in August 1961 Rowley had reported to Allard that, "All of us here at the College are more convinced than ever that it is not possible to properly train a professional staff officer for modern war in less than 22 months."[64]

Consequently, in 1965, the College provided strong objections to combining staff training amongst the three services. The argument put forward was that the competencies required by Canadian Army officers in nuclear and non-nuclear war should remain a separate two-year course due to the breadth of material that required mastery. Arguments were clearly laid out from an Army perspective as to the role of service staff education in an Army officer's professional development and the inadequacy of a joint service staff education to give officers a solid grounding in all aspects of Army operations. Officers who graduated from CASC were able to coordinate all types of land forces as well as carry out all forms of Army-related administration. This product could only be achieved through extensive study and mastery of Army operations, which when combined with other essential elements of professional knowledge would provide context for the employment of army forces.[65] Despite these protestations, unified staff education commenced at the new mandated Canadian Forces College in 1966 with further adjustments introduced in 1974.[66]

In retrospect, the two-year CASC course that evolved during Rowley's tenure developed in perspective, composition and duration as a result of a changed professional world. The lessons of the Second World War, the ascendancy of nuclear and other threats, the formation of NATO and Canada's involvement in UN operations all produced curriculum changes. Another far reaching implication was that the course increasingly incorporated American perspectives through the implementation of professional education that included approaches to nuclear conflict derived from US curriculum and from Canadian Army involvement in Europe within an American-dominated Alliance command. Also reflected in the course was the need for interoperability with not only Canada's longstanding Commonwealth friends, but also Canada's largest and closest ally in an increasingly tense cold war environment.

One shortcoming that continued despite the expanded curriculum was an apparent lack of understanding pertaining to the systemic derivation of military strategy from civilian policy direction. While officers of the Canadian Army and, subsequently, the Land Element were well versed in the application of military force in war and also, in an uniquely Canadian fashion, peace, the systemic linkages from the often nebulous objectives of civilian direction to the hard realities of military activities were not apparent, and their absence was noted by a myriad of reviews, reports and commentaries over the years. In the final analysis, the two-year CASC course represented a high point in Canadian Army professional military education. It was designed to provide the opportunity and environment in which to study, reflect upon, assimilate and synthesize professional knowledge, at a level that was arguably equivalent to graduate education. For the critical portions of its implementation, it was guided by Roger Rowley, whose later contributions to the professional development of the Canadian Forces were shaped in part by this period of his career as a senior military officer and innovative educator.

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ENDNOTES

1. This article is the result of work done by the authors for *The Report of the Officer Development Board Maj-Gen Roger Rowley and the Education of the Canadian Forces* (Waterloo: Wilfrid Laurier Press, 2010).
2. Canada, Department of National Defence, *Report of the Officer Development Board*, Vol. 1 (Ottawa: 1969), Foreword.
3. See Canada, Department of National Defence, *Report of the Officer Development Board*, 3 vols. (Ottawa: 1969).
4. Canada, CLFCSC, *Snowy Owl: Journal of the Canadian Land Forces Command and Staff College* (1972–1973), p. 109.
5. John A. Macdonald, "In Search of Veritable: Training the Canadian Army Staff Officer, 1899 to 1945" (Unpublished MA diss. Royal Military College, March 1992), p. 99–112.
6. In his monograph *Lament For An Army*, John English states, "Like the British Staff College, after which it was modelled, the CASC was the nursery of the General Staff and the single most important educational institution in the army." John A. English, *Lament For An Army: The Decline of Military Professionalism*, Contemporary Affairs Number 3 (Concord, ON: Irwin Publishing, 1998), p. 6.
7. Here "professional education" is defined as the non-technical command and staff knowledge and skills common to all officers. Technical and tactical education and training have remained the mandate of the Navy, Army and Air Force.
8. Canada, Department of National Defence, Vice Chief of the Defence Staff, File F 1901-4352/8(DO), "Canadian Forces Organization Order 1.8—Canadian Forces College, Toronto," 3 October 1966.
9. Rowley served with the Canadian Army during the Second World War, later attending both the Camberley Staff College and the Imperial Defence College. He served in a myriad of staff positions during the post-war years, like Director of Military Operations and Plans, Director of Infantry and Director of Military Training. In addition to being Commandant of CASC, he occupied a number of other senior command positions such as Commander of 2 Canadian Infantry Brigade Group, Commander of the Army Tactics and Organization Board and Deputy Commander Operations at Mobile Command. After his work as Chairman of the Officer Development Board (*Rowley Report*), he was granted an Honorary Doctorate of Military Science from RMC. Rowley retired from the Canadian Army in 1968. See "Obituary: ROWLEY, Major General (Ret'd) Roger Rowley, DSO, ED, CD, GCLJ, GOMLJ," in *The Canadian Guards Regimental Association* [document online], available at http://www.canadianguards.ca/bereavement4.htm; internet, accessed 14 October 2008.
10. See Canada, Directorate of History and Heritage (DHH) Archives, File 171.009 (D296), "Training Policy—CA (R) CASC—File 3200-1 Vol. 7 from 20 Mar 57 to 08 Oct 59."
11. *Ibid.*, document 47, "Annual Training Directive 1957–58," p. 5.
12. *Ibid.*, document 171 "Aide Memoire On the Conduct of the 1965–61 Canadian Army Staff Course," p. 2.
13. Canada, DHH Archives, File 76/157, "CASC Staff College Trg Papers 1958–1965," CASC SCS 3310-81/1-6 (G) to the Army Headquarters dated 25 Apr 62, "Tactical Doctrine, 1963–65 Course Canadian Army Staff College," p. 1–2.
14. Lieutenant-General Howard Graham had been a pre-Second World War Non-Permanent Active Militia (NPAM) officer who had stayed in the Army after that conflict. In 1935, he was a graduate of the pre-war staff training for NPAM officers; he also instructed a similar course in 1938. Howard Graham, *Citizen and Soldier: The Memoirs of Lieutenant-General Howard Graham* (Toronto: McClelland and Stewart, 1987), pp. 103–105 and 238–39.
15. George R. Pearkes had served with the Canadian Army through both World Wars and attended Camberley in 1919. Reginald H. Roy, *For Most Conspicuous Bravery: A Biography of Major-General George R. Pearkes, V.C. through Two World Wars* (Vancouver: University of British Columbia Press, 1977), p. 79–83
16. Quote and discussion from Canada, DHH Archives, File 113(D2), "CGS BDF3-3-5 Vol 3 Cdn Army Staff College. Papers relating to the operation of the Cdn Army Staff College and comments on Cdn attendance," Memorandum HQC 3310-81/1 TD (DGMT) dated 11 Jul 58 from Chief of the General Staff to the Minister of National Defence "Canadian Army Staff College Policy."

17. Brigadier M.P. Bogert, "The Course," in Canada, CASC, *Snowy Owl: Year Book of the Canadian Army Staff College* 1, no. 6 (1957): p. 17.
18. Canada, CASC, *Snowy Owl* 1, no. 6 (1957): p. 8; and also, Canada, CASC, *Snowy Owl* 1, no. 7 (1958): p. 9; and, for discussion of concepts of military revolution from the Middle Ages onwards see MacGregor, Knox and Williamson Murray, eds., *The Dynamics of Military Revolution: 1300–2050* (Cambridge: Cambridge University Press, 2001; reprint 2004).
19. "Change of Commandant," Canada, CASC, *Snowy Owl* 1, no. 7 (1958): p. 9.
20. Brigadier Roger Rowley, "The New Staff Course," Canada, CASC, *Snowy Owl* 1, no. 7 (1958): p. 15.
21. *Ibid.*
22. *Ibid.*, p. 16; and see also Desmond Morton, *A Military History of Canada From Champlain to Kosovo*, 4th ed. (Toronto: McClelland & Stewart Inc., 1999), p. 244–45.
23. Rowley, "The New Staff Course," p. 16–17; and see also Canada, DHH Archives, File 76/157,CASC SCC 3310-81/1-6 (DS) to Army Headquarters dated 10 Jun 58, documents 7–11, "Canadian Army Staff College Policy," p. 1.
24. Canada, DHH Archives, *CLFCSC Fonds*, Folio 197, CASC SCC 3310-81/1-2 (G) dated 17 Jun 66 "Report on 1965–66 Staff Course," "Annex A—Aim and Outline Scope 1965–66 Staff Course Series," p. 1–6.
25. Canada, DHH Archives, File 76/157, CASC SCC 3310-81/1-6 (DS) to Army Headquarters dated 10 Jun 58, documents 7–11, "Canadian Army Staff College Policy," p. 3–4.
26. Rowley, "The New Staff Course," p. 16–17.
27. Quoted in "The Editor's Page," in Canada, CASC, *Snowy Owl: Year Book of the Canadian Army Staff College* 2, no. 1 (1959–1961): p. 4.
28. Northern Army Group, of which the Canadian Brigade was part, was subordinate to LANDCENT (Land Forces Central Europe) [later AFCENT (Allied Forces Central Europe)] the NATO headquarters responsible for the conduct of the land battle in Germany. See Sean M. Maloney, War Without Battles: Canada's NATO Brigade In Germany 1951–1993 (Whitby, ON: McGraw-Hill Ryerson Limited, 1997), p. 64.
29. Elements of the Canadian Army were dispatched to the Middle East as part of United Nations Emergency Forces in response to the 1956 Suez Crisis. Desmond Morton suggests as a result of the recognition that Canada received for her part in this mission, "The armed forces had found a new roles as peacekeepers." Morton, A Military History of Canada From Champlain to Kosovo, p. 241–42.
30. Canada, DHH Archives, File 76/157, CASC SCC 3310-81/1-6 (DS) to Army Headquarters dated 10 Jun 58, documents 7–11, "Canadian Army Staff College Policy," p. 2.
31. Canada, DHH Archives, File 113(D2), "CGS BDF3-3-5 Vol 3 Cdn Army Staff College. Papers relating to the operation of the Cdn Army Staff College and comments on Cdn attendance," Canadian Army Headquarters HQ 3310-81/1 (MT 3) dated 20 Nov 62, "Canadian Army Staff College," p. 1.
32. For discussion concerning concepts of "soft power" see Joseph Jockel, The Canadian Forces: Hard Choices, Soft Power (Toronto: Canadian Institute of Strategic Studies, 1999).
33. Canada, DHH Archives, CLFCSC Fonds 80/71 (henceforth CLFCSC Fonds), Folio 197, "Presentation by Canadian Army Staff College to Conference on Integrated Staff Training 26 Jan 65—The Army's System Of Staff Training," p. 2.
34. *Ibid.*, p. 4.
35. Appendix entitled "Curriculum Plan," in United States, Department of the Army, CARL Archives, Accession No. N-13423.92, US Command and General Staff College: After Action report, 3 July 1954 to 9 July 1956 (n.d) and also page I–1; and see also, Lieutenant-Colonel F. W. Young, ed., *The Story of the Staff College 1858–1958* (Camberley: Staff College, 1958), p. 9–11.
36. A Second World War veteran, Lieutenant-General "Fin" Clark, held the position of Chief of the General Staff for the Canadian Army from 1958 to 1961. "Clark became the youngest major general ever in the Canadian Army when he was promoted to that rank in 1949 at age 40." Sean M. Maloney, 'Global Mobile': Flexible Response, Peacekeeping and the Origins of Forces Mobile Command, 1958–1964," in *The Army Doctrine and Training Bulletin* 1, no. 1 (Spring 2000): p. 20.
37. Allard was later chosen as the second Chief of Defence Staff of the unified Canadian Forces, after the resignation of Air Chief Marshall Frank Miller. Morton describes Allard as "A fighting soldier in Italy and Korea . . ." who ". . . treated unification as an order and an opportunity. A chronic optimist, he found virtues other officers may have overlooked; as a *Canadian*, he respected the fading British traditions, but unification was a unique opportunity to promote the French fact." See Morton, *A Military History of Canada From Champlain to Kosovo*, p. 252–53.
38. Canada, DHH Archives, File 113(D2), "CGS BDF3-3-5 Vol 3 Cdn Army Staff College. Papers relating to the operation of the Cdn Army Staff College and comments on Cdn attendance," HQ 310-81/1 TD 9068 Memorandum from the Chief of the General Staff to the Vice Chief of the General Staff dated 3 Mar 59 "Staff College Training."
39. See note of VCGS to CGS dated 4 Mar 59 written on *Ibid.*
40. Helmuth von Moltke was considered the military architect of the German wars of unification in the late nineteenth century. See Book II, Chapter 2 of Azar Gat, *A History of Military Thought: From the Enlightenment to the Cold War* (New York: Oxford University Press, 2001), p. 314–381.

41. Canada, DHH Archives, File 171.009 (D296), "Training Policy—CA (R) CASC—File 3200-1 Vol. 7 from 20 Mar 57 to 08 Oct 59," document 172 "Aide Memoire On the Conduct of the 1965–61 Canadian Army Staff Course," p. 1; Also see Carl Von Clausewitz, *On War*, Michael Howard and Peter Paret, eds. and trans (Princeton: Princeton University Press, 1976, paperback edition, 1989); and quote from page 81.
42. Canada, DHH Archives, File 171.009 (D296), "Training Policy—CA (R) CASC—File 3200-1 Vol. 7 from 20 Mar 57 to 08 Oct 59," documents 171–72 "Aide Memoire On the Conduct of the 1965–61 Canadian Army Staff Course," p. 1–2.
43. Rowley, "The New Staff Course," p. 18; and see also John Reichley, *International Officers: A Century of Participation at the United States Command and Staff College: 1894–1994* (Leavenworth, KS: United States Army Command and General Staff College, 1994), p. 42.
44. Young, ed., *The Story of the Staff College 1858–1958*, p. 9–11.
45. Canada, CASC, "A Snowy Owl Finds a New Home in Kansas," in *Snowy Owl:Year Book of the Canadian Army Staff College* 2, no. 1 (1959–1961): p. 31.
46. Canada, DHH Archives, File 76/157, CASC SCC 3310-81/1-6 (DS) to Army Headquarters dated 10 Jun 58, documents 7–11, "Canadian Army Staff College Policy," p. 5 and documents 15–20, CASC SCC 3310-81 (G1)/SCC 3310-81/1-6, "Minutes Of A Conference To Brief The VCDS On The New Canadian Army Staff College Course Commencing September 1959 (Held at the Canadian Army Staff College on 26 Sep 58," p. 2–3.
47. Canada, DHH Archives, File 76/157, documents 15–20, CASC SCC 3310-81 (G1)/SCC 3310-81/1-6, "Minutes Of A Conference To Brief The VCDS On The New Canadian Army Staff College Course Commencing September 1959 (Held at the Canadian Army Staff College on 26 Sep 58)," pp. 3 and 5.
48. Colonel W. W. Culp, "Resident Courses of Instruction," in *Military Review* 36, no. 2 (May 1956): p. 15.
49. Young, ed., *The Story of the Staff College 1858–1958*, p. 7.
50. Canada, DHH Archives, File 76/157, "CASC Staff College Trg Papers 1958–1965," document 28, Army Headquarters HQ 3310-81/1 TD 9016 (MT 3B) dated 29 Jan 59, "Canadian Army Staff College Course Commencing 8 Sep 59."
51. Canada, DHH Archives, *CLFCSC Fonds*, Folio 197, "Presentation by Canadian Army Staff College to Conference on Integrated Staff Training 26 Jan 65–Training Standards for Army Staff Officers," p. 1.
52. Canada, DHH Archives, File 76/157, "CASC Staff College Trg Papers 1958–1965," documents 15–20, CASC SCC 3310-81 (G1)/SCC 3310-81/1-6, "Minutes Of A Conference To Brief The VCDS On The New Canadian Army Staff College Course Commencing September 1959 (Held at the Canadian Army Staff College on 26 Sep 58,)" p. 2.
53. See Canada, Department of National Defence, *Report of the Officer Development Board*, 3 vols. (Ottawa: 1969).
54. Captain D. G. Loomis, "Strategy, Operations and Tactics," in Canada, CASC, *Snowy Owl: Year Book of the Canadian Army Staff College* 2, no. 1 (1959–1961): p. 10–14; Loomis' first expressed some of these ideas in "Principles and Rules of War," in *Canadian Army Journal* (January 1961): p. 33–46; and later, Loomis developed these concepts through graduate study at RMC. See Lieutenant-Colonel D. G. Loomis, "A Conceptual Study for Canadian Security in the 1970s and Beyond" (MA thesis, Royal Military College of Canada, 1969).
55. Boettger then goes on to provide the titles of the policy papers, "'On the Atlantic Front,' 'On the Pacific Front' and 'On the Campaigns of 1943.'" See Major K. H. Boettger, "Types of Strategic and Operational Papers in Military History," in Canada, CASC, *Snowy Owl: Year Book of the Canadian Army Staff College* 2, no. 3 (1963–1965): 29.
56. *Ibid.*, p. 29–31.
57. *Ibid.*, p. 97.
58. Quoted in Gat, *A History of Military Thought*, p. 340.
59. Quoted in Paul Hellyer, *Damn the Torpedoes: My Fight to Unify Canada's Armed Forces* (Toronto: McClelland and & Stewart Inc., 1990), p. 39; and see also original article, Captain J. G. Forth, "Unification—Why, How, When," in Canada, CASC, *Snowy Owl: Year Book of the Canadian Army Staff College* 2, no. 1 (1959–1961): p. 63–70.
60. Quoted in Canada, DND, "A Program For Professional Military Education For The Canadian Defence Force—A Report By The Working Group 19 March 1965" (Ottawa: National Defence Headquarters, 19 March 1965), p. 1.
61. "Vice Chief of Defence Staff Meeting 16/64" quoted in Canada, DHH Archives, *CLFCSC Fonds*, Folio 197, CASC SCC 3310-81/1-2 (G) dated 17 Jun 66 "Report on 1965–66 Staff Course," p. 1.
62. *Ibid.*, p. 1–2.
63. Canada, DHH Archives, *CLFCSC Fonds*, Folio 197, "Presentation by Canadian Army Staff College to Conference on Integrated Staff Training 26 Jan 65–The Army's System of Staff Training," p. 1–3.
64. Canada, DHH Archives, File 113(D2), "CGS BDF3-3-5 Vol 3 Cdn Army Staff College. Papers relating to the operation of the Cdn Army Staff College and comments on Cdn attendance," CASC SC 3310-81/1-1 (Comdt) to Vice Chief of General Staff dated 11 Aug 61, p. 1.
65. Canada, DHH Archives, *CLFCSC Fonds*, Folio 197, "Presentation by Canadian Army Staff College to Conference on Integrated Staff Training 26 Jan 65—The Army's System of Staff Training," p. 1–3.
66. See Canada, CLFCSC, *Snowy Owl* (1972–1973).

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COMBATANTS IN AFGHANISTAN: WHAT'S IN A NAME?

Captain D. Bowen

> *Few wars have been so well chronicled, as that now desolating America. Its official narratives have been copious; the great newspapers of the land have been represented in all its campaigns; private enterprise has classified and illustrated its several events, and delegates of foreign countries have been allowed to mingle freely with its soldiery, and to observe and describe its battles. The pen and the camera have accompanied its bayonets, and there has not probably been any skirmish, however insignificant, but a score of zealous scribes have remarked and recorded it.*[1]

In 1866, chronicling the American Civil War provided non-combatants with a previously unimagined view into the happenings of conflict. In 2010, the transparency of modern conflict is presumed and the intermingling of combatants and civilians is profuse. Now, political warriors and their staffers more hotly contest and fight the wars of perception, adding their flair and turn to all matters internal and external to politics. The perception of what violent actions are fair, proportionate and discriminate are carefully managed and vehemently argued by savvy legal chiefs in major cities around the world. This article will analyze some of those arguments and confirm for the reader the correct interpretation of current international law as it pertains to armed conflict.

Before 2001, it would be unimaginable to sit around the dinner table or Officers' Mess debating the merits, definitions and rights of unlawful belligerents, illegal combatants, and enemy civilians. The events of 11 September 2001 changed not only the face of conflict[2] but also the amount of exposure mainstream audiences have had to what was previously considered obscure international law. This article analyzes international humanitarian law (IHL) surrounding the distinction between combatants and civilians, and will clarify what has become a confused and often misunderstood area of international law. This article will illustrate that current IHL recognizes only two categories of persons with respect to conflict, those who are combatants and those who are civilians.

It is important from the very beginning of this article to clarify what IHL is. Sometimes referred to as Laws of Armed Conflict or the Law of War, IHL comprises the rules governing the appropriate conduct of war. IHL does not concern itself with the legality of initiating war; for *jus in bello* to apply, it accepts that conflict has already begun.[3] While IHL does contain aspects of human rights law, it is separate from and distinct from this class of law. Once conflict has commenced, IHL provides the guidelines for what is and is not acceptable conduct.[4]

As long as wars have been fought, laws have existed in an attempt to limit the wickedness of armed conflict.[5] The most well-known and relevant body of IHL is the Geneva Conventions and the two additional protocols.[6] The idea behind the Geneva Conventions is:

> *that the law can and should protect all persons caught up in war—making the difference between life and death, between humanity and inhumanity—whether they are civilians, prisoners of war, the wounded, the hors d'combat, or solders on the battlefield.*[7]

The relevance of IHL during armed conflict appears clear, as too does the relationship between the Geneva Conventions and IHL. It thus appears straightforward that the Geneva Conventions be adhered to where applicable. In this next section, irregularities with interpreting IHL will be introduced and explained.

THE ISSUES

The events of 11 September 2001 shaped not only the outlook of a generation towards their own security, but also how they viewed their rights and responsibilities towards removing 'evil' from the world:

> *For most Americans, hit for the first time with such violence within their own territories, and on such symbols of political power and authority, outrage remains the only serious ground for judgment. In the USA, especially, political judgment has been powerfully shaped by an elemental ethic of revenge.*[8]

This acceptance of the need for revenge and the accompanying rhetoric has been particularly damaging to interpretations of and adherence to IHL. Taft refers to the passions that are invariably aroused when personal and shared safety is at stake, and how these have led to the misapplication and infringement of IHL.[9]

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The deliberate misinterpretation of IHL for political purposes, even for temporary security reasons, cannot be justified within the bounds of international law.[10] The Vienna Convention on the Law of Treaties (VCTL)[11] is very clear on *pacta sunt servanda*. The US, along with over half of the world, has ratified the VCLT,[12] and remains legally bound to comply with their international legal obligation of adhering to treaties which they have ratified. The US ratified the four Geneva Conventions on the 2 August 1952[13] and remains compelled to comply with these conventions since that date. This obligation to comply with the Geneva Conventions is not applicable at the convenience of the US; the Geneva Conventions apply at all times during armed conflict and must be adhered to.

The separation of legal and political considerations is difficult, and perhaps not an area mastered by US power brokers. The necessity to maintain domestic security in order to achieve political success is logical and reasonable. Sensational scholars such as Hobbs, Machiavelli, Waltz and Mearsheimer have long argued dramatic methods that could be employed to achieve or maintain security, but rarely have they advocated such methods as we have seen employed by members of the international community who claim to be morally irrefutable and beyond reproach.[14] In addition to such matters of extraordinary renditions, authorized methods of torture and covert operations, matters such as the wrangling of legal concepts surrounding the enemy that are fraught with irregularities have been energetically pursued by

politicians and legal advisors alike. The most significant of these concepts has been the acceptance of the categorization of persons during armed conflict. Rona summarizes the crux of the topic surrounding IHL definitions:

> *"unlawful combatant" is an oxymoron, while the term "lawful combatant" is redundant. A combatant is immune from criminal responsibility for lawful acts of belligerency, but may be prosecuted for war crimes such as targeting civilians or using prohibited means of combat, such as biological weapons or rape. In turn, a combatant may be targeted and detained without charge or trial for the duration of the armed conflict.*[15]

This article will address the issues surrounding whether persons engaged in armed conflict in Afghanistan should legally be regarded as combatants, non-combatants, or as unlawful belligerents. This paper will demonstrate that the third category is confusing and unnecessary. It is a legally grey area that has created sufficient confusion in order to allow the US and its allies to deny individuals the rights that legally should be afforded to them as either combatants who are prisoners of war or as civilians charged or being investigated for committing criminal offences.

This article will avoid the moral arguments and contentions regarding insurgents in Afghanistan or transnational terrorism. These are very emotive issues that have been largely responsible for the political manipulation of what are essentially legal matters. This paper does not comment on what outcome should be pursued for persons suspected of fighting against a democratically elected government in Afghanistan or for those people who are engaged in illegal terrorist actions around the world. These are matters that must be considered by those whom we entrust with drafting and creating domestic and international laws. Until such time as a new legal system is introduced, it is essential for our long-term peace and security that those who are responsible to do so abide by and comply with existing laws.[16]

The US, and many of its allies, interpreted the actions and statements of al Qaeda's members and leaders as declarations of war and thus considered themselves to be at war against al Qaeda and those who provide them support and sanctuary. The International Criminal Tribunal for the former Yugoslavia noted that:

> *Armed conflict exists whenever there is a resort to armed force between States or protracted armed violence between governmental authorities and organized armed groups or between such groups within a State.*[17]

The US argues favorably that it is bound by IHL in its actions against enemy forces in Afghanistan, making its response and continued actions lawful and within the purview of international law.[18]
Most audiences generally accepted the initial response of the US and its allies as reasonable and lawful. Opinion rapidly began to change in some respects though.

One of the most contentious issues was the failure of the US to recognize persons captured as either prisoners of war (POW) or as civilians. The creation of a new category of person with limited rights has created a maelstrom. This unnecessary contention was contrary to the universal

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applicability of the Geneva Conventions.[19] The Geneva Conventions have near universal ratification. Furthermore, IHL is now firmly rooted in customary international law and must be seen as applicable to all states, even those whom as yet have failed to accede to the Geneva Conventions. The US accepts that the Geneva Conventions apply to its actions in Afghanistan and yet its interpretation of clearly written and easily understood law has baffled many.[20]

COMBATANT VERSUS NON-COMBATANT

> *He who kills in peacetime may be sentenced to death or life imprisonment; he who kills in wartime is decorated while the band plays.*[21]

As previously stated, it is accepted that the US and its allies were in a lawful state of war with al Qaeda and the Taliban, a conflict that was governed by IHL.[22] As mentioned, US action towards enemy persons following the invasion of Afghanistan caused concern around the world. Whether members of the Taliban should have been accepted as combatants, representing the closest thing Afghanistan had to a national government and regular military organization, or whether members of al Qaeda should have been accepted as civilians committing horrendous criminal acts, is debatable, but US policy regarded all parties as neither civilians nor combatants and denied everyone the privileges afforded by either status.[23] This creation of a third category of persons has raised even more debate than which of the original two categories is most appropriate.

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THE TWO AND ONLY TWO CATEGORIES OF PERSONS

No-one for a moment believes that conflict is easy or that policy decisions about how war is to be waged will always benefit everyone, but decisions made by politicians and justified by lawyers must been seen to do more than advance politicians' own political interests in the short term at the expense of long-term cooperation, rule of law, and security:

Never before has it been so difficult for the Soldier to distinguish between the targeted and the protected—the combatant and the civilian. Compliance with this concept of distinction is the fundamental difference between heroic Soldier and murderer.[24]

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The duties of a soldier in war are numerous and complicated. It is essential for the soldier's sake, and for civilians and combatants that soldiers encounter, that the status of all persons is readily identifiable and logical. Perabo describes the principle of discrimination as consisting of two distinct groups: those who are combatants and those who are not. Those persons who fall into the latter category are to be granted immunity from the effects of war as far as is practically possible.[25] This concept of distinguishing combatants from non-combatants is as old as it is important, and it is through this concept that humanitarian considerations are infused into the fabric of violent conflict. Unfortunately though, even after centuries of conflict and accompanying agreements, treaties and conventions, there still remains a degree of uncertainty with regards to the specifications of combatants and civilians.[26]

It has been argued by some that the decision of who is a combatant, and thus entitled to the privileges of a POW, and who is not, can be decided by a competent tribunal in accordance with Article 5 of Geneva Convention III.[27] This opens the Pandora's box of what is a competent tribunal, a question beyond the scope of this paper which has been discussed and critiqued by legal scholars and courts alike. Suffice to say, though, that on the battlefield, the definitions and clarity afforded to whether someone is a legitimate target, i.e. a combatant, and who is not, i.e. a non-combatant, are all too unclear. This is unfortunate and unnecessary. The Geneva Conventions provide a very clear test. If you are a member of a regular armed force of a party to the conflict, or volunteer corps or similar, and fulfill all the criteria described in Article 4(2) of Geneva Convention III, then you are entitled to POW status and the associated privileges. Those people who are not protected by Geneva Conventions I, II or III are regarded as civilians and protected in accordance with the provisions of Geneva Convention IV. Elsea further contends that even those civilians who commit acts of belligerency retain their status as civilians and the relative protection provided by Geneva Convention IV.[28]

When we consider that the two fundamental principles of IHL are, first, that the methods and means of defeating an enemy are not unlimited and, secondly, that there is a necessary distinction between combatants and civilians,[29] it is surprising that it could be argued that with regards to the latter principle there exists a grey area in between these two distinguishable groups. Surely one of IHL's fundamental principles is not vague and ambiguous. Israel's Supreme Court, sitting as the High Court of Justice, after considering this issue agreed, clearly ruling that there is no third category of person:

That is the case according to the current state of international law, both international treaty law and customary international law. It is difficult for us to see how a third category can be recognized in the framework of the Hague and Geneva Conventions. It does not appear to us that we were presented with data sufficient to allow us to say, at the present time, that such a third category has been recognized in customary international law.[30]

This debate is so very important for several reasons, but primarily so that it is clear who is to be afforded what rights and privileges during armed conflict. Combatants, as will be discussed in more detail later, are legitimate targets during conflict, but have the right to take part in hostilities towards an enemy. As a result, combatants are afforded the privilege of POW status if captured by an enemy and they are not liable to prosecution so long as they acted in accordance with IHL. Civilians conversely have the privilege of not being the target of attack. Civilians do not however have the right to directly participate in hostilities, and lose their immunity from attack during such time as they are participating in the conflict. Civilians are also liable to prosecution for any acts that constitute a crime, such as murder and assault, even if it is against an enemy force.[31]

In order to be able to better appreciate the complexities—and simplicities—of the two categories of persons, combatants and civilians, this article will discuss each category in more detail. Ultimately, the concept can only be as effective as our understanding and correct application of the law.[32]

COMBATANTS

In its most simple form, combatants have been described as those persons whom have the "right to participate directly in hostilities."[33] While it is accepted that civilians do and have benefited from IHL, it should be remembered that IHL as a body of law was created for the benefit of combatants.[34] It allows combatants to perform their duties—acts that would normally be illegal—with confidence that as long as one's acts do not surpass the permissible standards of IHL, they are immune from prosecution. In this context, a soldier accepts that he or she may be the subject of attack, whilst civilians are not.[35]

The concept of freedom of action without prosecution for acts that would in a conflict-free zone constitute the most heinous of crimes is often taken for granted. As with all things, with this right comes great responsibility. With the right to conduct lawful acts of war, combatants are expected to first comply with proportionality in accordance with the principle that the means and methods of warfare are not unlimited.[36] Secondly, combatants are expected to differentiate between those potential targets that are lawful and those that are not; principally, civilians; those *hors de combat*; places of worship, education, or cultural significance; and objects of indispensable importance to the survival of the civilian population. Combatants have a special status that protects them from prosecution so long as they conduct themselves in accordance with the laws of war.[37]

This of course means that combatants are targetable themselves. As long as they remain members of the armed forces of a party to a conflict they remain legitimate targets, until such time as conflict ceases or they become wounded or surrender.[38] Once captured, combatants are entitled to POW status and the benefits associated with such status as detailed in Geneva Convention III.[39]

The Geneva Conventions considers combatants to be those:

> *"[m]embers of the armed forces of a Party to the conflict as well as members of militias or volunteer corps forming part of such armed forces [and] [m]embers of other militias and members of other volunteer corps, including those of organized resistance movements, belonging to a Party to the conflict … provided that such militias or volunteer corps, including such organized resistance movements, fulfill the following conditions:*
>
> *(a) That of being commanded by a person responsible for his subordinates;*
>
> *(b) That of having a fixed distinctive sign recognizable at a distance;*

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(c) That of carrying arms openly; and

(d) That of conducting their operations in accordance with the laws and customs of war."[40]

It is thus clear that those persons who are members of the armed forces of a party to the conflict, in addition to those other persons who are members of militias, volunteers corps and the like, whom also comply with the four additional criteria, are combatants. This category of person is entitled to commit acts of war, immune from prosecution, so long as their actions remain within the purview of the laws of war. This category of person also retains the right at all times, so long as they retain their status as a combatant, to be treated as a POW and be afforded the related privileges of being a POW in accordance with Geneva Convention III.

CIVILIANS

Article 50(1) of Additional Protocol I to the Geneva Conventions of 1949 defines a civilian as any person who is not a combatant.[41] Dorman succinctly states that there is no grey area; you are either a combatant or a civilian.[42] This is not to say that a civilian will never take part in combat, as civilians will do as civilians please. But what can be assured is that a civilian only has the rights and privileges that a civilian does have. A civilian participating in conflict does not have the rights and privileges afforded to a combatant and likewise, a civilian may lose some precious privileges once enjoyed, should that civilian commit acts deemed unlawful.

Civilians who commit acts against any party to a conflict are liable to prosecution, as they do not have the immunity from prosecution that combatants do. A civilian who commits an illegal act against any party to conflict has committed a criminal act and should be treated as such, including investigation, questioning, and, if appropriate, prosecution and punishment.[43] Civilians simply do not have a legal right to participate in armed conflict. Regardless of the moral obligations a civilian may feel, as a non-combatant, they are expected to comply with their lawful duties as a civilian, which includes not taking active part in hostilities. If a civilian does participate in hostilities, they remain civilians, but loose their immunity from attack, and become a lawful military target for as long as they participate in hostilities.[44] It is very important to note that although civilians loose their immunity from attack whilst they participate in conflict, they remain liable to prosecution for any crimes committed. The direct participation in conflict does not award a civilian the immunity from prosecution that a combatant normally maintains. The Israel High Court of Justice similarly determined that:

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> *a civilian—that is, a person who does not fall into the category of combatant—must refrain from directly participating in hostilities. A civilian who violates that law and commits acts of combat does not lose his status as a civilian, but as long as he is taking a direct part in hostilities he does not enjoy—during that time—the protection granted to a civilian. He is subject to the risks of attack like those to which a combatant is subject, without enjoying the rights of a combatant, e.g. those granted to a prisoner of war. True, his status is that of a civilian, and he does not lose that status while he is directly participatingin hostilities.*[45]

Violations of laws are a criminal matter, whether committed by combatants or civilians, and must be determined by an appropriate court. Committing a crime does not change one's status from combatant to civilian or civilian to combatant. During the Vietnam War, a "Vietcong was arrested while throwing a grenade into a downtown Saigon café and was handed over to the Vietnamese authorities for prosecution as a criminal".[46] Although this act was presumably motivated by political desires caused by the ongoing war, the person committing the act was a civilian and was thus treated as a civilian, not a POW, nor any other 'alternative' category of person. To participate in hostilities without the right to do so is a violation of law. Practically, a civilian who attacks a combatant is guilty of the crime of murder or assault. A person found guilty of committing such crimes does not loose their civilian status and is punished according to the law applicable to civilians.[47]

It must be remembered though that a civilian is not a lawful target until they directly participate in hostilities. Any attack upon civilians who are not participating in conflict is a crime punishable in accordance with IHL.[48] There is much ongoing discussion and debate about what constitutes 'direct participation', and also when this direct participation begins and ends. Whether a civilian looses immunity from attack only when carrying a weapon en route to attack, and regains this protection on arriving back home and recommencing farming is unclear.[49] What remains clear though is that regardless of when this immunity from attack is lost and regained, this civilian at all times remains categorized as a civilian and is subject to the laws applicable to a civilian.

This is particularly important when applied to the current conflict in Afghanistan. Insurgents and other criminal groups who fail to wear or display a fixed distinctive sign that is recognizable at a distance, carry their arms openly, or conduct their operations in accordance with the rule of law are clearly not combatants and are thus civilians. This means that whilst these civilians directly participate in hostile acts they are violating Afghani law and committing crimes. As long as these civilians are participating in the conflict, they become legitimate military targets and loose their civilian immunity from attack. All other rights afforded to a civilian should be afforded to these criminals including legal representation and an appearance before an appropriate court. The uniqueness of the insurgent's methods for committing criminal acts of murder, intentionally causing injury, making threats to kill, and other similar offences, does not justify the creation of a new category of person. All of these offences can and should be dealt with under existing Afghani domestic law.

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Changing the status of a person from civilian to combatant because of their engagement in criminal acts of belligerency potentially enshrouds someone with a level of legitimacy which they do not deserve.[50] Furthermore, it changes the lawfulness of their acts and provides protection from prosecution that was and is not intended in current international or domestic law. The act of belligerence means that a civilian may become the target of attack and may also be liable to prosecution for the commission of illegal acts; it does not however entirely remove a person's right to protection by Geneva Convention IV.[51] It must be remembered that like in conflict-free zones a person reasonably suspected of committing an offence may be detained for questioning, investigation and ultimately for punishment should they be found guilty.[52]

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COMPLIANCE WITH THE LAW

The US has argued that while it has been possible in many countries to deal with terrorists and insurgents using domestic criminal laws, this is not the case in Afghanistan because of the dearth of capability to investigate, arrest and prosecute these offences.[53] This lack of capability is not a reflection of the existing law but of the political will, technical knowledge and experience that should be developed through appropriate training and time. Regardless, a dearth of capability, despite the existence of suitable legal structures, is not an excuse to deny people their legal rights or re-categorize them as something that they are not.

At the same time it acknowledged that it was engaged in an armed conflict in Afghanistan, the US recognized al Qaeda as a criminal organization, further baffling analysts as to why al Qaeda's members were not then treated as criminals.[54] Terrorist groups, regardless of the evilness of their acts, are not so far out of the legal spectrum that they require a completely new system to govern their actions. Traditional laws are appropriate and suitable to deal with current threats and ongoing conflict. The purpose and motivation of IHL is not inconsistent with current desires to defeat terrorism and manage modern conflict.[55] Terrorists:

> *retain their status as civilians, but they lose the special protection of the laws of armed conflict. This means that the law of armed conflict does not protect terrorists against legitimate military counter-terrorist measures, i.e. military measures, which are in accordance with the right to self-defence.*[56]

Current IHL is effective and comprehensive. There is no need for new categories of persons to be created. The present system of two categories of person, combatants and civilians, is sufficient to support both humanitarian and human rights imperatives, while also maintaining the legitimate need for security and justice in the face of contemporary insurgency, terrorism and conflict. As with any rules, procedures and laws, they are only as effective as they are adhered to and complied with.[57] IHL is no different. All parties to conflict, perhaps especially those claiming to be morally virtuous, must ensure that IHL is properly implemented and obeyed. After all, it is in everyone's interests, especially ours as professional soldiers, to protect human rights, achieve or maintain security, and make the transition to peace with tomorrow's neighbours more likely.

ABOUT THE AUTHOR…

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ENDNOTES

1. G. Townsend, *Campaigns of a Non-Combatant*, (New York, NY: Blelock & Company, 1866), p. 11.
2. A. Roberts, "Doctrine and Reality in Afghanistan", *Survival*, Vol. 51(1); (February 2009): p. 29–60.
3. For clarification on the difference between the laws regarding resorting to force jus ad bellum, versus those laws governing the conduct of war *jus in bello*, see C. Johnick and R. Normand, "The Legitimation of Violence: A Critical History of the Laws of War", *Harvard International Law Journal*, Vol. 35, (1994): p. 52–54.
4. Casey et al. accurately state that "the existence of armed conflict is sufficient to trigger the law of war and its rules for dealing with belligerents." For more information see L. Casey, D. Rivkin, and D. Bartram, *Unlawful Belligerency and its Implications Under International Law*, available online at http://www.fed-soc.org/Publications/Terrorism/unlawfulcombatants.htm (accessed June 2009). Whereas international human rights law such as the International Covenant on Civil and Political Rights (ICCPR) prohibits the deprivation of liberty and abuse against all people, IHL provides the legal framework to facilitate conditions for the reasonable waging and conduct of war. For more information, see ICCPR, adopted and open for signature 16 December 1966, entering into force 23 March 1976, and also the International Covenant on Economic, Social and Cultural Rights, adopted and opened for signature 15 December 1966, entering into force 3 January 1976. IHL is considered *lex specialis* once conflict has commenced, but does not completely displace IHRL. IHL and IHRL have complementary humanitarian aims, and should both be taken into account. The Venice Commission believes that IHL and IHRL both apply during conflict: "Human rights law complements international humanitarian law, and together, both areas of law provide minimum standards of treatment for persons involved in armed conflict." See Venice Commission of the Council of Europe, 'Possible Need for Further Development of the Geneva Conventions', *Guantanamo: Violation of Human Rights and International Law*, Opinion No. 245 of the European Commission for Democracy through Law, Adopted by the Venice Commission at its 57th Plenary Session, 12–13 December 2003, in "Points of View—Points of Law" Collection, (Strasbourg, France: Council of Europe Publishing, 2003), p. 95. Cited hereafter as Venice Commission.
5. J. Picket, *Development and Principles of International Humanitarian Law*, (Leiden, Netherlands; Martinus Nijhoff Publishers, 1985), p. 5–9. Picket even demonstrates the similarity between many ancient texts and recent laws and customs of war.
6. "The Geneva Conventions and the Additional Protocols are generally viewed as the core documents of international humanitarian law" at R. De Nevers, "The Geneva Conventions and New Wars", *Political Science Quarterly*, Vol. 121(3), (2006): p. 372, but not to be forgotten are the Laws of the Hague that govern lawful means and methods of waging war.
7. W. Taft, "The Law of Armed Conflict after 9/11: Some Salient Features", *Yale Journal of International Law*, Vol. 48 (2003): p. 319.
8. B. Gokay and R. Walker, 11 September 2001: *War, Terror and Judgement*, (London, UK; University of Keele, Frank Cass Publishing, 2003), p. 64.
9. Taft, p. 319.
10. Not only is there no justification for the abuse and misinterpretation of IHL for political purposes, its misuse will ultimately weaken this body of law and endanger future generations involved in conflict. For more information, see H. Gasser, "Acts of Terror, 'Terrorism' and International Humanitarian Law", *International Review of the Red Cross*, Vol. 84(847), (September 2002): p. 568.
11. Vienna Convention on the Law of Treaties, adopted 22 May 1969 and open for signature 23 May 1969, entered into force on 27 January 1980, United Nations, *Treaty Series*, Vol. 1155, p. 331. Article 26 states that "Every treaty in force is binding upon the parties to it and must be performed by them in good faith." This is expressed by the Latin law term "pacta sunt servanda."
12. While over half the world has ratified the VCLT, it is accepted that all states remain compelled to comply by its acceptance as an international customary legal norm.
13. International Committee of the Red Cross, *Geneva Conventions of 12 August 1949: State Parties*, available online at http://www.icrc.org/IHL.NSF/WebSign?ReadForm&id=375&ps=P (accessed May 2009). See also International Committee of the Red Cross, *Geneva Conventions of 12 August 1949: United States of America*', available online at http://www.icrc.org/ihl.nsf/NORM/D6B53F5B5D14F35AC1256402003F9920?OpenDocument (accessed May 2009).

14. It was the determination of investigations into the Abu Ghraib abuses that several policy decisions contributed to those regrettable events, beginning with a disregard of the Geneva Conventions. For more information see De Nevers, p. 374.
15. G. Rona, "Legal Issues in the War on Terrorism", *German Law Journal*, Vol. 9(5), (May 2008): p. 722.
16. De Nevers, p. 387, correctly argues that the Geneva Conventions are a positive tool in the fight against terrorism.
17. International Criminal Tribunal for the former Yugoslavia, *Tadic Appeals Case*, (The Hague, Netherlands: ICTY Appeals Chamber, 2 October 1995): paragraph 70.
18. J. Bellinger, "Legal Issues in the War on Terrorism", *German Law Journal*, Vol. 8(7), (2008): p. 735–737. Hereafter cited as Bellinger 2008.
19. De Nevers, 384, argues that IHL is not limited by geographic or political boundaries; it permeates all locations and all conflicts.
20. Bellinger 2008, p. 743, acknowledges that the US is in an armed conflict with al Qaeda and that the Supreme Court (in the Hamdan Case) recognized the relevance and applicability of the Geneva Conventions. One year earlier, Bellinger made a similar argument that "There is no question that armed conflicts between States Parties to the Geneva Conventions, including conflicts with terrorist-sponsoring States Parties, constitute international armed conflicts. The President's February 2002 order recognized that the armed conflict with the Taliban was at that time an international armed conflict." For more information see J. Bellinger, "Legal Issues in the War on Terrorism: Reply to Silja Silja N. U. Vöneky", German Law Journal, Vol. 8(9), (September 2007): p. 871–878.
21. Picket, p. 85.
22. Bellinger 2008, p. 736.
23. Gasser, p. 567.
24. M.D. Maxwell and R.V. Meyer, "The Principle of Distinction: Probing the Limits of its Customariness", *The Army Lawyer*, (March 2007): p. 1.
25. B. Perabo, "The Proportionate Treatment of Enemy Subjects: A Reformulation of the Principle of Discrimination", *Journal of Military Ethics*, Vol. 7(2), (January 2008): p. 136–156.
26. K. Watkin, "Warriors without Rights? Combatants, Unprivileged Belligerents, and the Struggle Over Legitimacy", *Humanitarian Policy and Conflict Research Occasional Paper Series*, No. 2, (Winter, 2005): p. 1.
27. Dorman agrees that while the Geneva Convention does provide the framework for determination of one's status, it may not be obvious on the battlefield what the status of someone is. For more information see K. Dormann, "The Legal Situation of 'Unlawful / Unprivileged Combatants'", *International Review of the Red Cross*, Vol. 85(849), (2003): p. 45–74.
28. J. Elsea, *CRS Report for Congress: Treatment of "Battlefield Detainees" in the War on Terrorism*, (Washington, DC; Congressional Research Service, The Library of Congress, 13 January 2005), p. 2. At p. 9, Elsea makes it very clear that while those civilians whom commit acts of belligerency maintain their status as civilians and the associated protections of Geneva Convention III, they are still liable for prosecution for acts that combatants would not be punished.
29. Watkin, p. 8.
30. Supreme Court (High Court of Justice), *The Public Committee against Torture in Israel v The Government of Israel, HCJ 769/02 ('PCATI')*, 13 December 2006, available online at http://elyon1.court.gov.il/Files_ENG/02/690/007/a34/02007690.a34.pdf (accessed May 2009). Cited hereafter as HCJ.
31. E. Gillard, "Business Goes to War: Private Military / Security Companies and International Humanitarian Law", *International Review of the Red Cross*, Vol. 88(863), (September, 2006): p. 531. Gasser, p. 560, comments that although combatants have immunity from certain acts, the means and methods that are to be employed in conflict are not unlimited, and that any breach of IHL will constitute a crime and any combatant who has committed such acts shall be prosecuted. Having the status of combatant or POW does not bring with it immunity from criminal prosecution against acts that are contrary to IHL. Likewise, nowhere in Geneva Convention IV is a civilian granted immunity from committing violent acts. Consequently, any civilian who has committed such acts shall be prosecuted.
32. Watkin, p. 1.
33. Dormann, p. 45.
34. Article 4 of Geneva Convention IV notes that "Persons protected by the Convention are those who, at a given moment and in any manner whatsoever, find themselves, in case of a conflict or occupation, in the hands of a Party to the conflict or Occupying Power of which they are not nationals."
35. Maxwell and Meyer, p. 1.
36. Dormann, p. 45–46.
37. Watkin, p. 12–13.
38. M. Sassoli and L. Olson, "The Relationship between International Humanitarian and Human Rights Law Where it Matters: Admissible Killing and Internment of Fighters in Non-International Armed Conflicts", *International Review of the Red Cross*, Vol. 90(871), (September, 2008): p. 605–606.

39. See Elsea, p. 8–9; Dormann, p. 45–46; and Watkin, p. 12–13.

40. As described in Article 13 of Geneva Convention I and Article 4 of Geneva Convention III. For a very similar definition, see Hague Convention (IV) Respecting the Laws and Customs of War on Land and its Annex: Regulations concerning the Laws and Customs of War on Land, The Hague, 18 October 1907. Article 43(2), Additional Protocol I to the Geneva Conventions (8 June 1977), states succinctly that "[m]embers of the armed forces of a Party to a conflict are combatants".

41. Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977. Note that the US is only a signatory to Additional Protocol 1 (AP1) and as yet has not ratified it, unlike the 168 other states that have already ratified AP1. For a full list of states that have either ratified or acceded AP1, see International Committee of the Red Cross, "State Parties to Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol 1), 8 June 1977', available online at http://www.icrc.org/ihl.nsf/WebSign?ReadForm&id=470&ps=P (accessed June 2009). For a full list of states that have signed, but not ratified or acceded to AP1, see International Committee of the Red Cross, "State Signatories to Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol 1), 8 June 1977", available Online at http://www.icrc.org/ihl.nsf/WebSign?ReadForm&id=470&ps=S (accessed June 2009). Dormann, 46, accurately contends that "a civilian is any person who does not belong to one of the categories of persons referred to in Article 4A (1), (2), (3) and (6) of GC III". Thus, a civilian is any person who is not a combatant.

42. Dorman, p. 72.

43. Watkin, p. 65–66.

44. Dormann, p. 46.

45. HCJ, p. 22.

46. Gasser, p. 567.

47. Rona, p. 725.

48. HCJ, p. 21.

49. What seems most reasonable and in accordance with legal principles is his intent. At that stage where a civilian has the *mens rea* associated with committing a crime, associated with participation in hostilities, and takes such acts so that they might commit such a crime, is the most reasonable time that they should lose their protection from attack.

50. Rona, p. 731.

51. Dormann, p. 73.

52. Sassoli and Olson, p. 616. In addition to imprisonment associated with criminal activity, both combatants and civilians may be interned for security reasons. Internment may occur for POWs in accordance with Article 21 of Geneva Convention III for the duration of hostilities. Likewise, civilians may be interned if "absolutely necessary", "for reasons of security", in accordance with Article 42 and Article 78 of Geneva Convention IV.

53. Bellinger 2008, p. 741.

54. Elsea, p. 11, referring to a White House press statement made on 20 February 2002.

55. S. Vöneky, "Response—The Fight against Terrorism and the Rules of International Law—Comment on Papers and Speeches of John B. Bellinger, Chief Legal Advisor to the United States State Department", *German Law Journal*, Vol. 8(7), (2007): p. 749.

56. Vöneky, p. 752.

57. Venice Commission, p. 95–106.

Source: Combat Camera

Source: Combat Camera

MAKING STRIDES AT THE HEART OF THE INSURGENCY

Major C. Bolduc and Captain J. Vachon

In a fight between a fly and a lion,
the fly cannot deliver a knockout blow
and the lion cannot fly.[1]

For the first time since the Canadian Forces counter-insurgency (COIN) manual was published, the 2nd Battalion, Royal 22e Régiment Battle Group (2 R22eR BG) has taken the innovative step of placing a force at the heart of the insurgency that is aimed solely at operating in accordance with the COIN doctrine. In the villages of BELANDAY, RUMBASI and ZALAKHAN, the A Combat Team began operating as what is now known internally as the Advance Counter-insurgency Team (ACT). This article is aimed at detailing the progress we have made with this new approach to the Canadian mission in AFGHANISTAN, and we would furthermore like to communicate the lessons learned to our successors.

Our orders were very clear and straightforward: send the company to a key community where the insurgency is flourishing and have the company live among the local population and operate in accordance with our COIN doctrine. The desired endstate was to:

- protect the gains made during Op KALAY I;
- widen the safety belt around the city of KANDAHAR;
- establish a bridgehead for the provincial reconstruction team (PRT); and
- topple the insurgency in the region in question.

INITIAL SITUATION

Our targets were located on the border of the PANJAWAY region and the DAND district in a known Taliban area as well as along insurgent transit routes. The farming villages were cut off from civilization, and the villagers were living under Taliban rule and were subject to Taliban threats. The roads, which were narrow, unpaved and regularly booby-trapped by the insurgents, were in a terrible state, and there was no electricity. Several artesian wells were supplying the villages with water, but some of the wells were out of commission. The local police were alone and frightened, as they were constantly under attack and were living like refugees in their fortified stations. The police were no longer conducting safety patrols, and no help was being given to the local population. Distressed farmers were fleeing their precious harvests because their farm fields were the sites of daily clashes between insurgents and police. The schools had been destroyed in insurgent raids and no medical services were available in the villages. Some of the teachers had fled to KANDAHAR while other less fortunate ones had been killed by the Taliban. In short, the villages were under the complete control of the insurgents and functioned as privileged havens from which the insurgents carried out command and control activities and maintained their logistical support, thus contributing to the insurgency in KANDAHAR.

ORGANIZING TO SUCCEED

After two months of combat operations in the PANJAWAY insurgent areas, the company quickly reorganized to operate for an extended period of time among the local population in areas where the insurgents regularly travelled. It was therefore necessary to leave the forward operating bases (FOBs). Before our deployment, we renamed ourselves the Advance Counter-insurgency Team (ACT), as we were 2 R22eR BG's bridgehead for launching COIN manoeuvres. There were enormous leadership and change-management challenges for leaders at all levels when it came to turning the combat mentality into the COIN philosophy. All of the leaders made sure that the soldiers adopted a proper security posture that, at the same time, fostered the forging of ties with the local population. To do that, we based our approach on the Combined Action Program model, which had been used successfully

by the United States Marine Corps (USMC) in Vietnam. We adapted the model to the terrain and circumstances in Afghanistan.

> *This program paired teams of about 15 Marines led by a non-commissioned officer with approximately 20 host-nation security personnel. These combined action platoons operated in the hamlets and villages in the northern two provinces of South Vietnam adjacent to the demilitarized zone. These Marines earned the trust of villagers by living among them while helping villagers defend themselves. Marines trained and led the local defence forces and learned the villagers' customs and language. The Marines were very successful in denying the Viet Cong access to areas under their control. The Combined Action Program became a model for countering insurgencies.*[2]

Based on the lessons learned from that program, we created an ad hoc organization made up of an infantry platoon amalgamated with resources from engineering, civil-military cooperation (CIMIC), psychological operations (PSYOPS) and medical operations. We also forged a partnership with a group of local police—the Afghan Uniformed Police (AUP)—that was already in place in the villages. Initially, the company was divided into two separate and autonomous platoon groups, as our third platoon was detached for the 2 R22eR BG quick reaction force (QRF). During our deployment in the villages, we established a foothold in the existing police sub-stations (PSSs) that had all but been abandoned. We also used Afghan compounds to establish a part of our forces. We thus created a new operating concept that we named platoon houses. Our presence had a direct impact on the safety of the population. The use of local buildings minimized the need to build new tactical infrastructure. The company command post was co-located with a platoon in BELANDAY and, with the help of our company's integral echelon (2 X 16-ton Mercedes AHSVS), we ensured that we were autonomous when it came to resupply. However, we were aware of the fact that, in operating that way, we were accepting a higher level of force-protection risk.

ENCOURAGING LEADERSHIP AT ALL LEVELS

We also maximized mission command with respect to subordinate leaders, and we focused on the leadership, resourcefulness and creativity of our lieutenants and NCOs. As was stipulated in the COIN doctrine of the US Marine Corps, mission command is essential to the success of this type of operation.

> *Mission command is ideally suited to the mosaic nature of COIN operations. Local commanders have the best grasp of their situations. Under mission command, they are given access to or control of the resources needed to produce timely intelligence, conduct effective tactical operations, and manage IO and civil-military operations. Thus, effective COIN operations are decentralized, and higher commanders owe it to their subordinates to push as many capabilities as possible down to their level. Mission command encourages the initiative of subordinates and facilitates the learning that must occur at every level. It is a major characteristic of a COIN force that can adapt and react at least as quickly as the insurgents.*[3]

Thanks to their many initiatives, the NCOs were integral to COIN operations. The chain of command ratified the delegation of decentralized powers with the aim of maximizing flexibility and speed of action at the lowest level. It was confirmed that the morale of the operators and the results on the ground were proportional to the level of confidence allocated to the leaders on the ground.

SUSTAINMENT

Sustainment is broached at the start of the analysis, as right upon our arrival in the Afghan theatre of operations, we were exposed to the following expression in our military jargon: "Experts speak of logistics, and beginners speak of tactics." Resupply is a matter of survival and is crucial to operating under the extreme, torrid conditions we were exposed to. Land-convoy logistical support significantly increases the level of risk on the roads and requires complex planning, particularly in austere and remote regions. The combat team echelon proved to be adequate to support our operations. Each ACT on the

ground was designed so that it could be autonomous. In that respect, a logistical support vehicle (16-ton ASHVS) with a sea container (seacan) proved to be very useful. We filled up the sea container with the equipment required for our survival in forward operating zones, and our robust echelon made it possible to push the support forward. In addition, air resupply made it possible for us to be even more autonomous, particularly with the sling-load-equipped CHINOOK helicopters. One of the factors that is key to the success of COIN operations is supplying operators on the ground with the resources necessary to carry out the mission.

However, the constraints governing road movements in AFGHANISTAN caused us a great deal of difficulty. All of the convoys must comprise a minimum of three combat vehicles. In addition, in spite of the constant threat from improvised explosive devices (IEDs), it was essential to drive our vehicles on the roads in order to advertise our presence there and prove to the population and the insurgents that we had freedom of movement in our areas of operation. We established that, with a combat team, two of the operator sub-sub-units (size of a platoon and up) could operate on two separate axes (villages). The third sub-sub-unit could act as a manoeuvre and resupply element and thus compensate for personnel rotation during rest periods (HLTA). When our third platoon was freed from the task of supplying the quick reaction force (QRF), it became possible for us to have greater flexibility in our area of responsibility and to facilitate our logistical support in a timely manner. We then established a third platoon house, making it possible for us to extend our influence to another Afghan village. The choice of locations and villages was made taking into account the military principle of mutual support while keeping in mind the importance of constantly keeping our main supply route (MSR) under surveillance. However, in operating three platoon houses, we quickly realized that everything was becoming more complex; resupply, kinetic platoon operations and the management of resources during periods of leave left us with no flexibility or backup. As such, all major (combat team) operations required regrouping, which was invariably conducted to the detriment of platoon-house security. It was at that time that joint operations with the Afghan National Army were taking on all their significance, and Afghan personnel were thus able to counteract the lack of Canadian troops both within operations and within rear areas.

THE POWER OF MONEY

Starting from the time of the first patrols, monetary resources (commander contingency funds) were decentralized at the platoon level in order to optimize the impact that money could have on the population. That made it possible to quickly create ties with the local leadership and increase the appeal of coalition forces and the Afghan National Security Forces (ANSF) to the detriment of insurgents. Immediate access to Afghan currencies made it possible for the operators to stimulate the local economy with small projects that had a direct impact and act as a force multiplier during the missions, convincing the local populations that we had more to offer than the insurgents when it came to changing and improving their daily lives. For example, the following things were done:

- local workers were hired;
- relevant intelligence was generated;
- purchases were made;
- local contracts were initiated; and
- schools were repaired.

In all of the above areas, our expenditures were effective in distancing the local population from the insurgents. The approach used was meticulous and deliberate in order to avoid creating a parallel economy that would fall apart after our departure. We also ensured that the many projects were synchronized with the activities of the Provincial Reconstruction Team in order to avoid duplicating tasks or carrying out efforts that would not be sustained by Canada in the medium term. At all times, our reconstruction efforts were primarily aimed at reinforcing the legitimate power of the tribal chiefs. That once again involved a doctrinal approach:

Special funds (or other available resources) should be available to pay wages to local people to do such beneficial work. Accomplishing these tasks can begin the process of establishing HN government legitimacy. Sample tasks include:

- *Collecting and clearing trash from the streets.*
- *Removing or painting over insurgent symbols or colours.*
- *Building and improving roads.*
- *Digging wells.*
- *Preparing and building an indigenous local security force.*

Image provided by authors

Lieutenant Bériault makes purchases in a Kandahar bazaar to encourage the local economy and initiate humanitarian projects

- *Securing, moving, and distributing supplies.*
- *Providing guides, sentries, and translators.*
- *Building and improving schools and similar facilities.*[4]

In addition, in order to assist people in isolated regions, the teams sometimes bought supplies from local markets. The city of KANDAHAR is now much safer and is prospering. It is full of bazaars and is an excellent place to find recycled resources. Thanks to our interpreters and our obliging Afghan police officers, we regularly bought all sorts of supplies to help the local people and carry out our reconstruction projects. Whether with respect to food, equipment or any other essential human need, the operators must have the monetary resources delegated at the lowest level so that they can have an immediate impact at the opportune moment. The projects that we initiated with the Afghan population were carefully chosen. We needed to ensure that the initiatives were simple and could be carried out within a short timeframe without attracting the attention of the insurgents. In that respect, we followed the advice of David Kilcullen in his article on counter-insurgency.

> *Often programs succeed because of specific local conditions of which we were unaware, or because their very smallness kept them below the enemy's radar and helped them flourish unmolested. […] Keep programs small: this makes them cheap, sustainable, low-key and (importantly) recoverable if they fail. You can add new programs. Also small, cheap and tailored to local conditions, as the situation allows.*[5]

Before launching the project, a numbers of *shuras* (a meeting or council of tribal leaders) were held between local leaders and our own leaders so that the plan chosen would meet villagers' needs. The *maliks* (heads of families) and mullahs (religious leaders) were very keen on putting the villagers to work, as that provided jobs to a number of unemployed people and created a flow of revenue within their tribe. For our part, it enabled us to kill two birds with one stone: in addition to stimulating the local economy and strengthening our relationships with local clan leaders, we also reduced the Taliban's influence and control over the people. The most successful projects involved:

- the repair of the irrigation systems (wadi);
- the renovation of the Belanday school;
- the repair of roads; and
- the construction of artesian wells.

After spending nearly four months in the villages, we quickly realized that our concept of time was very different from that of the Afghans. With extreme summer temperatures ranging from 45°C to 55°C, our locals workers did not work even close to eight hours straight. They began working very early in the day so that they could take advantage of the few cooler morning hours. In addition, between the five prayer breaks per day and the never-ending meal breaks, we quickly had to revise our time estimates upwards. Although we were all very eager to see fast results, we had to be patient and adjust to the Afghans' style and pace of life. As Mr. Kilcullen would say, "Small is beautiful and smooth is fast!"

RELATIONSHIP WITH THE POPULACE

When operating in hostile, often austere, environments, it is necessary that each member of the Advance Counter-insurgency Team (ACT) understand all of the implications of the COIN missions, especially considering the fact that a negative perception of our actions by the local community could be extremely detrimental to us. A good relationship with the local people that is based on respect, honour and trust was essential and greatly contributed to the success of the COIN operations in our villages. As the Canadian COIN doctrine sets out, the population's support is essential, and all operators must understand that:

> *A successful COIN campaign requires the support of the populace. Thus all military activities must be conducted with a view to gaining and maintaining the support of the local populace and, to this end, creating and maintaining the legitimacy of the campaign. This must be understood at all levels of command, including the lowest tactical levels.*[6]

The operators lived as part of the local population (hence the expression "going native"). The teams on the ground therefore have to be made up of mature and competent members. Each soldier must know the importance of properly understanding the local culture to break the influence of the insurgents. Despite the human-resource constraints (e.g. the limited experience of the young leaders and the increase in the number of new soldiers as a result of intensive recruiting), our most experienced NCOs targeted personnel with the required skills and drove the search for personnel who were willing and motivated to operate as part of specific missions. They thus made up for members' lack of experience and maturity when it came to certain types of COIN operations. The most sensitive tasks that we had to carry out included directing a *shura*, establishing local contracts, and teaching discipline basics to local security forces. By excelling in those activities, our NCOs thus maximized the desired effects on the

local population while respecting the population's cultural and religious specificities. That demonstrated beyond a shadow of a doubt the necessity of selecting resourceful, autonomous members for complex operations. In addition, the members' willingness to blend in with the local population is extremely important. The Canadian Forces COIN doctrine does a good job of illustrating the importance of being well acquainted with the culture of the local people when countering an insurgency.

Image provided by authors

Major Bolduc talks with a malik during a security patrol

> *The COIN forces and government agencies must actively work to counter the insurgent attempts to coerce or persuade the population. A careful analysis must be made of the population and its culture in order to comprehend its grievances, motivations and the ways in which the insurgent will target it and influence it. At the very least, the population must be protected from security threats. But this will not be enough for enduring success. The population must be persuaded to reject the insurgent narrative and ideology, which lends the insurgency credibility and justification.* [7]

Throughout the operations, we organized ongoing training so that the operators could benefit from specific instruction on their area of operation. In spite of the high operational tempo of the missions, the platoon commanders led review periods on Afghan culture and the basic principles of COIN operations. By understanding the customs and ways of the local population (tribal culture varies a great deal from one group to another), the troops adapted progressively and objectively. We asked the soldiers to set aside their prejudices and preconceived ideas concerning the Afghans. The use of competent interpreters, maliks or mullahs made it possible to obtain good cultural advice. As soon as the operators arrived in the host country, they immediately started applying the advance training they had received with the aim of creating a positive initial rapport with the local people. That made it possible to establish favourable conditions by creating a relationship of trust with the locals. Those actions had a domino effect and led to concrete results in a short amount of time. The training on Afghan culture that we received and the operators' interest in learning the local language were beneficial in forging true ties and proving that we were being honest in the just cause of our actions.

STRENGTHENING LOCAL LEADERSHIP AND LEGITIMATE AUTHORITY

Image provided by authors

Master Corporal Pépin is pictured during a presence patrol in the village of BELANDAY

At the initial stage of our presence in the villages, our leaders on the ground conducted intensive presence patrols in order to make contact with the *maliks* and mullahs. Afghan villages are small patriarchal communities in which the leaders control all of the daily and economic activities. Given the status and influence of those leaders, they are prime targets for insurgents. It was therefore crucial that we make contact with the leaders and win them over to our cause. In our initial encounters, we often received a chilly, bitter reception. We then realized that the *maliks* were reticent to speak to us in public, as they feared reprisals and threats from the Taliban. Murders, attempted murders, kidnappings, arson, attacks and assault are a part of everyday life for Afghans who live in the insurgents' areas of influence. As a result of the increased, consistent presence of the same stakeholders, we were able to forge relationships with the tribal chiefs more quickly. In addition, to avoid the scrutiny of Taliban sympathizers, informers or members who had infiltrated the villages, our meetings had to be held in Afghan compounds far from all possible influence. In adopting that approach, people began to trust us and talk to us. Information began to flow, and we were able to increase our situational knowledge.

When the bonds of trust and communication had been established, we embarked upon small humanitarian projects to stimulate the local economy. In general, after we gained the support of the *maliks*, the rest of the population began to trust us. By using the chieftains as our initial point of contact with the villagers, it was possible to find a number of local workers and to continue expanding the aid projects for the local people. The *maliks*' leadership of the people was thus reinforced, which contributed to the inhabitants rejecting the influence of the insurgents. Increasingly frequent discussions during patrols and *shuras* made it possible to collect more intelligence. That gave us the opportunity to precisely establish the tribal and familial bonds within the community and better understand the complexity of the issues and conflicts at the local level. Nevertheless, it is still very difficult to establish proper cooperation between the *maliks* and local police, as the police have not yet been able to rid themselves of the reputation they have earned over the years as being a corrupt and ineffective force.

ESTABLISHING A CULTURE OF RIGOROUS DISCIPLINE WITH THE AFGHAN NATIONAL SECURITY FORCES (ANSF)

One of the major problems that we have encountered with respect to security has been the local police's lack of legitimacy with the population. The members of the Afghan Uniformed Police (AUP) operating in our sector were from MAZAR-E-SHARIF. They belonged to the Tajik tribe and spoke Dari. Most of the villagers in the western part of the Dand district were from the Popolzai tribe and spoke Pashto. Those ethnic, linguistic and cultural differences created a de facto divide between the local population and the police forces. It was therefore easy for the insurgents to make contact with and infiltrate the population, as most of the insurgents spoke Pashto. In addition to suffering the negative effects brought about by the existing cultural and linguistic differences, the bond of trust between the local population and the police was virtually non-existent because the police did not patrol in the villages. The police

stations were regularly attacked by insurgents or villagers who were outraged by the police's behaviour, and a climate of fear had taken hold. On a number of occasions, the police confused members of the local community with insurgents, and a number of farmers were beaten and mistreated, which led to yet more internal conflict. In a few cases, the police fired on locals and stole their goods and food. We quickly concluded that the police were refugees in their fortified stations and were trying to survive in a hostile environment. The American COIN doctrine clearly highlights the fact that a legitimate police force that is accepted by the local population plays a key role in the fight against insurgents.

Image provided by authors

Lieutenant Bériault and a member of the AUP carry out humanitarian aid activities to improve the image of the local police

> *Countering an insurgency requires a police force that is visible day and night. The host nation will not gain legitimacy if the populace believes that insurgents and criminals control the streets. Well-sited and protected police stations can establish a presence in communities as long as the police do not hide in those stations. Police presence provides security to communities and builds support for the HN government. When police have daily contact with the local populace, they can collect information for counterinsurgents.*[8]

In order to re-establish the legitimate authority of the police, considerable, constant effort was made to counter that harmful situation, which greatly fostered the propaganda and operations of the insurgents. We insisted that our Afghan interpreters help the police officers and the villagers communicate. Having local interpreters who know the Dari and Pashto languages well helped us re-establish communication between the two parties. Then, a directive mentorship system was put in place upon our arrival. We established a daily patrol plan that the AUP was required to participate in. Our most experienced NCOs held a number of training sessions and discussions with the police in order to ensure that they understood our intentions and the correct way to act with the local population. During joint patrols, the police were forced to change their behaviour towards the local population, and any misconduct was corrected immediately. Then, our soldiers acted as mediators to explain to the local population that members of the police were now going to change their behaviour towards them and conduct patrols to protect the villagers. A number of discussions were held with the Afghans, the AUP, our soldiers and the

interpreters to discuss security problems and arrive at shared solutions. The initial reticence of the police quickly transformed into a smoothly functioning partnership during patrols. Our aim is still to motivate the AUP to patrol autonomously, but that will require more time. Nevertheless, during joint patrols, the police were encouraged to be proactive and show the villagers that security had been re-established in their area. We were happily surprised when the local population approached police officers directly to discuss security concerns. It is important to mention that, near the end of the mission, an incident occurred in which a young Afghan woman was picked up by the Afghan police. Under the Pashtun code of honour, young women are forbidden to be in the presence of men without permission or a family member being present. The young woman had been kidnapped by the insurgents and released near where the police were patrolling. The police members' reaction was to immediately notify the village *malik* of the situation. Without going into too much detail about the situation, it is important to mention that the *malik* came personally to congratulate and thank the Afghan police and the Canadian troops for their response. Because of the code of honour, the father of the girl asked that the chief of police and the young woman be put to death because his honour had been sullied. As a result of the cooperation of the Canadians, the image of the Afghan police of BELANDAY improved a great deal.

> *The presence of police forces, particularly if seen to be leading operations, will have a normalizing effect on the population.*[9]

DESTROYING THE INSURGENTS' INFLUENCE

The success that our company enjoyed on the ground clearly showed that to really destroy the insurgents' influence, we must focus the bulk of our efforts on the population rather than on the insurgents. The approach and posture that we adopted during our presence patrols were considerably different from those used as part of the combat patrols that we conducted during the kinetic operations at the start of the mission. Our operators had to fully understand that we needed to distance ourselves from the perception that we were on a hunt for the Taliban. The patrollers kept a good security posture while placing importance on interacting with the villagers. The following passage is how the Canadian Forces COIN doctrine explains the need to maintain daily contact with the local population:

> *Daily contact with the local populace must also be used to gain valuable information regarding the insurgents, their aims and methods as well as any reasons as to their support amongst the populace. This will support the pursuit and engagement of the insurgents and inform other activities that will seek to undermine the moral claims of the insurgents and address root causes and grievances.*[10]

With their human-relations skills, the members of our PSYOPS detachment were able to increase tenfold the impact of the information operations messages. After several weeks of patrolling, the local population understood the worth of the Canadian mission and provided a lot of intelligence about the insurgents. A number of inhabitants came to see us directly to tell us where the insurgents had planted improvised explosive devises. That precious information made it possible for us to act quickly and avoid unnecessary losses. The intelligence that was provided by the local population clearly showed that the hold that the Taliban had on the populace was growing weaker by the day.

In order to fully integrate ourselves into the population, we formed platoon groups which took up residence in Afghan buildings. Those buildings, known as platoon houses, were chosen—based on their proximity and ease of access—to operate in the designated villages. That change of posture had a direct impact and made it possible for members to quickly form relationships with villagers. Living directly among the population immediately sent the message that we were there to help the Afghans. We knew that to earn the trust of the local people, we could not give them the impression that we were hiding behind the walls of a big fortress. Forward operating bases such as Masum Ghar and Sperwan Ghar do not foster connections with the local population. Those fortifications are equipped with large defensive perimeters and send the wrong message to the populace. A number of villagers told us that they feel that

Image provided by authors

Sergeant Cossette is pictured during a SHURA with a number of maliks and mullahs

we are hiding behind walls and that we do not care about the civilian population. The civilians suffer atrocities at the hands of Taliban members, who lurk at the heart of the population. In short, a number of people think that we are simply afraid of the insurgents and that it is for that reason that our soldiers stay inside our fortified areas. The COIN doctrine very clearly sets out how important it is to stay in direct contact with the population. That daily, ongoing interaction with the local people is a basic principle that is known and required to topple an insurgency. The message that must be conveyed through our posture and actions is that all of our efforts are aimed at protecting the populace.

> *Ultimate success in COIN is gained by protecting the populace, not the COIN force. If military forces remain in their compounds, they lose touch with the people, appear to be running scared, and cede the initiative to the insurgents. Aggressive saturation patrolling, ambushes, and listening post operations must be conducted, risk shared with the populace, and contact maintained. The effectiveness of establishing patrol bases and operational support bases should be weighed against the effectiveness of using larger unit bases. These practices ensure access to the intelligence needed to drive operations. Following them reinforces the connections with the populace that help establish real legitimacy.*[11]

ENDSTATE

For the members of the 2 R22eR BG A Coy, the COIN operations officially began on 1 July 2009. When we departed on 1 November 2009, we were very proud to have left behind sustainable accomplishments on the ground. With respect to security, direct insurgent attacks decreased by 95% in our area of operation. Local police actively patrol every day with Canadian mentors. The relationship between the AUP and local leaders greatly improved thanks to the many *shuras* that were held and to the increased professionalism of the police. We are still finding several explosive devices per week, but now one out of every two devices is reported to us by the villagers. The training we gave the Afghan police has enabled them to recognize the indicators of an improvised explosive device, which accords us much more freedom of movement and facilitates the work of the engineers. On the roads, a number of culverts that were posing a security threat have been repaired or replaced. With respect to governance, we have instituted weekly meetings with the *maliks* to discuss and find shared solutions to the area's specific

issues. As a result of the money that was invested in the *maliks*' villages, and because we encouraged them to manage projects, we have improved the *maliks*' image as legitimate leaders and improved governance at the village level. We have thus had a significant impact on the Taliban. Some of the villagers have even forced insurgents out of their communities on their own. In terms of development, the work that we provided to the villagers has hugely stimulated the local economy. Several kilometres of irrigation canal were cleaned, and that has made it possible to cultivate vegetable field crops, which will no doubt be more abundant during the next growing season. Over 25 artesian wells were restored to working order in the villages. Because there are now fewer confrontations, farmers have been able to return to cultivating their fields, and that has had a positive impact on relations with villagers. The BELANDAY school restoration project is now 75% complete. In addition, the district leaders are also earning legitimacy from the projects they are facilitating. We are confident that our successors will successfully complete the projects that we have begun.

CONCLUSION

The approach adopted by A Coy of 2 R22eR BG in the DAND and PANJAWAY districts turned out to be very promising, which is worth highlighting when considering the lessons learned. Our accomplishments showed that the Canadian COIN doctrine works in Afghanistan. Particular attention must be placed on pre-deployment training in order to promote and implement the basic COIN principles. The primary focus is and remains the local population. It is advisable for us to maintain a corporate memory within our forces with the help of specialized COIN-operations training (that is linguistic, cultural, sociological, anthropological, historical, etc.). In addition, civil-military cooperation (CIMIC), psychological operations (PSYOPS) and the basic elements of human intelligence (HUMINT) are essential assets for operators on the ground, as we do not necessarily require specialists but rather need operators who know how to use those tools. During our involvement in Afghanistan and in counter-insurgency wars, it would be advisable to create a COIN cell in our combat training schools. However, in order to avoid formalizing everything in the training, it is important that we adjust the current curriculum so that it reflects the actual level of our soldiers' knowledge and skills, particularly in relation to our junior and non-commissioned officers. Effective counter-insurgency operations are based on having a good attitude in the face of the cultural differences required to achieve the desired goals. It is important to encourage professional development through reading, training and exchanges with our allies. Sharing and receiving knowledge with units specializing in counter-insurgency operations would be an asset (for example, it would be good to do internships and organize conferences with the Green Berets or the British Special Air Service) in order to broaden our horizons. We hope that this article has highlighted the changing nature of the Canadian mission's direction in Afghanistan and that it will encourage our successors as they carry out their mandate.

> *Protecting the people is the mission. The conflict will be won by persuading the population, not by destroying the enemy.*[12]

To be effective and implement the conditions that will make COIN operations in Afghanistan successful using the platoon-house concept, we must first ensure that the units secure their areas of responsibility. It will then be possible to start development and reconstruction projects. That is why it is important to put the elements of the three-block war into practice and instil in our soldiers the habit of operating in the appropriate kinetic manner in environments involving stabilization and reconstruction activities. Without security, NGOs and other development agencies will not get involved in rural areas deemed to be too dangerous. The Canadian model of "secure, clear, hold and build" is a valuable concept that is practised by the 2 R22eR BG. The infantry coys, in securing the villages, encouraged the creation of small development projects. The platoon-house method also paved the way for the provincial reconstruction teams, whose primary responsibility is to root the "hold" via medium and large-scale projects. Synchronization between the BG and the PRT is essential and fundamental to the Canadian COIN concept.

The command team of the 2 R22eR BG A Coy would like to thank all of the partners and personnel who believed in the new approach and who worked so hard to ensure that the mission was a success.

ABOUT THE AUTHORS...

Major Charles Bolduc joined 1 R22eR in 1998. He served as the commander of a mechanized infantry platoon for three years, during which time he was deployed to Bosnia-Herzegovina as part of Op PALLADIUM. He was then posted to the Canadian Forces Leadership and Recruit School, where he held the position of course commander for the officer cadets and then the adjutants. He was transferred to 2 R22eR in 2007 and held the position of operations officer. He was promoted to the rank of major, and commanded the 2 R22eR BG A Coy in Afghanistan during TF 1-09. He currently serves as A Coy Commander at the Infantry School in Gagetown, NB.

Captain Jean Vachon enrolled as a non-commissioned member in the Royal 22e Régiment in 1989. He served in the three battalions, including on the base in Lahr, Germany, from 1990–1993 and as part of the parachute company from 2000–2001. He was accepted into the University Training Plan Non-Commissioned Members (UTPNCM) program in 2001 and completed a bachelor's degree in history at Université Laval. He went on a mission to Qatar in 1991, on missions to the former Yugoslavia in 1992 (which included the opening of the airport in Sarajevo) and 1995, and on a mission to Afghanistan, where he served as the 2IC of a battle group inf coy during ROTO VII. He is currently the 2IC of the 2 R22eR services coy.

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Source: Combat Camera

CANADA'S PHYSICAL FITNESS STANDARD FOR THE LAND FORCE: A GLOBAL COMPARISON

T. Reilly, PhD

The history of the Land Force Command Physical Fitness Standard (LFCPFS) is an interesting reflection of the changing demands on the Canadian Army. Currently, the Canadian Army employs the LFCPFS, a.k.a. the Battle Fitness Test (BFT). Finalized in 1991,[1] the development of this standard began in 1984 with the identification of the CF Land Force Occupational Requirements.[2] Some current members of the Canadian Army will remember back to 1972 when the Army employed a test incorporating elements of muscle strength and endurance, cardiovascular endurance and agility. Following this, in 1977 the CF employed a timed 1.5 mile run with age and gender standards based on the work of Cooper.

In 1978, the Directorate of Military Occupational Structures (DMOS) began to identify and quantify the most demanding tasks of approximately 100 trades in the CF.[3] For the infantry these were determined to be walking, running and crawling with a weapon, marching (with a 20 kg rucksack), loading and unloading material onto trucks, digging trenches, and laying minefields.[4]

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From the mid 1960s to 1980s, the Force Mobile Command (FMC) Combat Readiness Physical Fitness test was a 2 x 10 mile test, performed on two consecutive days, that required soldiers to march out with supplies, stay overnight and walk back the next day; this was the precursor to the Battle Efficiency Test (BET) (A-PD-050-015/PT-001 *Physical Fitness Training in the Canadian Forces*). The mid-1980s brought the BET, which consisted of 2 x 16 km (10 mile) marches, scaling a six-foot wall, jumping an eight-foot ditch and carrying a soldier for 200 m, all performed in full battle gear. There was no "time" requirement for this test, and success was achieved with completion.[5] The BET was followed by the development of a 19 item Indoor Standardized Obstacle Course (ISOC) designed by Jetté et al.,[6] which included running, scaling walls, crawling, pulling, lifting, pushing, and carrying. As of 1991, the ISOC was abandoned due to the need for further validation for its acceptance by the CF,[7] and the LFCPFS was developed and adopted.

A general fitness test was applied to entire CF in 1983, as the CF EXPRES (Exercise Prescription) was developed in agreement with the principle of "universality of service." This test included assessments of handgrip, push-ups, sit-ups and a sub-maximal step test, to be replaced by a 20 m shuttle run introduced in the late 1990s. The EXPRES was designed to predict members' performance on five common military tasks. The EXPRES test is still the primary fitness standard for the Air Force and Navy, and is also used by LFC after two unsuccessful attempts at the LFCPFS.

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Members of the Ville de Quebec are tested on part one of the CF EXPRES test; the 20 m shuttle run

The original tasks included in the LFCPFS were selected by a committee of Army subject matter experts (SME) and approved by Army Council (AC). AC agreed that rather than examine all the trades, or even all the combat arms, a LF member must be physically capable of the physical demands of "infantry" specific duties only. After infantry specific duties were compared to those of the other combat arms, and more demanding tasks were identified in the other three occupations, AC concluded that the most demanding tasks of a "field soldier" were: weight loaded marching, casualty evacuation, digging trenches, and ammo box lifts. The LFCPFS is currently the approved Army fitness standard, and until April 2010 it involved a 13 km march carrying 24.5 kg of equipment, a 100 m casualty evacuation using a fireman's carry on the shoulders, and a trench-dig task requiring the movement of 0.486m^3 of pea gravel. The ammo box lift was not accepted by some locations due to the logistical demand for equipment and is no longer a part of the test battery.

In December 2007, in response to a request from Commander Land Force Doctrine and Training System (LFDTS) submitted in October, the Chief Military Personnel (CMP) tasked Canadian Forces Personnel Support Agency (CFPSA) Human Performance Research and Development to initiate a comprehensive review of the current LFCPFS. Specifically, it was suggested that the new standard consider how tactics and training have evolved from the post-cold war conditions of the early 1990s. While the casualty evacuation component (fireman's carry) was their primary concern, it was determined that this may be an opportune time to re-evaluate all the tasks that make up the LFCPFS.

The Canadian Forces Health and Fitness Strategy launched in 2008 originally instigated the development of Environment-specific fitness standards for the Navy and Air Force, and a review and redesign of

the current LFCPFS. Since then, after two years of research to develop these standards, the need to revisit the five common tasks for the CF was identified. Research will focus on an investigation of the current common military tasks among the three Environments and the development of a revised predictive fitness test (to replace the CF EXPRES), which will reflect the change in physical demands of CF operations since those determined 25 years prior. This project is titled Fitness for Operational Requirements of CF Employment (FORCE).

To provide a bit of insight on the status of the CF relative to other NATO countries requires a review of the current state of the fitness standards for the U.S. and U.K. armies.

Canada and the U.K. employ the same methods of fitness standard development; we must develop our standards based on valid occupational requirements in order for our fitness standards to be defensible in a Court of Law in accordance with Human Rights Legislation. The physical demands of these occupational requirements must be determined in a systematic manner, using a heterogeneous and representative sample of participants, in order to investigate the level of fitness (aerobic or anaerobic) required for each occupation. To develop an "occupational requirement," a standardized method has been established and exercised with a variety of occupational groups[8] including the U.K. military.[9]

As a fitness standard is generally applied to large groups, sometimes predictive tests (such as the CF EXPRES) are desired. However, these predictive tests must contain a significant statistical link to performance on the occupational tasks. Specifically, much military research has attempted to predict load carriage marching performance by means of running performance.[10] After decades of research there is still very little success linking the two. This is most likely because those who have less body mass will perform better at running compared to their heavier counterparts. It has been found, however, that larger individuals perform better on load carriage; as load carriage is less demanding for those who are carrying a smaller percentage of their body mass, smaller persons carry a larger percentage of their body mass at a given load.[11] In general, a run test does not do a good job predicting an individual's ability to perform a heavy load carriage march (an occupational demand). In addition, the relevance of push-ups as a predictor for occupational task performance receives a great deal of criticism.[12] Again, body mass influences performance, as a push-up or a sit-up requires you to move your own mass, therefore disadvantaging larger individuals. However, when required to lift and carry an object (e.g. jerry can, or casualty) the smaller person is disadvantaged.[13]

WHY IS THE U.S. ARMY PHYSICAL FITNESS TEST SO DIFFERENT FROM THE BFT?

The current U.S. Army Physical Fitness Test is not a measure of combat readiness and it is not meant to be.[14] Numerous recent publications from the U.S. Army highlight the disconnect between the Army Physical Fitness Test (APFT) and the real physical demands of combat as determined by their Mission Essential Task List (METL), similar to our Individual Battle Task Standards (IBTS).[15] The MELT requires the U.S. Infantry to possess the following abilities: (1) to raise and carry a 160-pound person on their back, (2) walk, run, crawl, and climb over varying terrain for a distance up to 25 miles, and (3) carry a minimum of 65 pounds evenly distributed over the entire body.[16] Though these tasks are a stated requirement, there is no direct assessment tied to ensuring that each infantryman can perform them. As a result, unless a unit chooses to assess these or similar tasks, there is no practical enforcement of these regulations.[17]

Recently, the 1986 version of the Army Physical Readiness Test underwent a name change to the APFT. This was done in part because the Army's physical fitness doctrine writers realized that the APFT in its current form (the one used today) was not an accurate assessment of combat readiness; in fact, it has been labelled as being more of a **track and field** test than a **battle field** test.[18] A recent review concluded that the current APFT is unduly advantageous to lighter personnel, and despite most physically demanding military tasks being better performed by those with larger lean body mass, these individuals are penalized by the push-ups, running and sit-ups prescribed in the AFPT.[19]

In addition, a predictive physical fitness test such as the APFT has led to a dangerous cycle of testing and training as soldiers adopt a "training for the test" mentality when they should be "training for the tasks." Baker concluded that units are training for the APFT instead of for mission-essential physical tasks;[20] that is, they are allowing the APFT to drive training instead of basing training on mission-essential physical tasks. This is partly due to the fact that rewards are tied to performance on the APFT, such as soldiers earning promotion points and leaders earning bragging rights based on APFT results.[21]

Because of these problems, it has been recommended that the APFT be de-emphasized in lieu of more specific training, and testing be based on divisions' real world missions and areas of operations.[22] In an attempt to have a more occupationally relevant fitness test, the Marines have recently introduced a much more practical Physical Fitness Standard incorporating a timed 800-yard run, repeated lift of a 30-pound ammunition can for two minutes, and movement through a 300-yard course requiring a combat crawl, ammunition resupply, body drag (10 yards though a series of 10 cones), casualty carry, and grenade throw. According to Colonel B. Mcguire, U.S. Marine Corps, the entire test is conducted in combat boots and utility uniforms on over 200,000 incumbents twice annually in an effort to assess soldiers' job-related physical capabilities and move away from the predictive push-ups and sit-ups style testing. The reasoning behind this transition was simply that task-specific testing "ensures we train the way we fight." The APFT may soon undergo a revision; a 2004 report from the U.S. Army Research Institute of Environmental Medicine (USAREIM) indicates that the entry level physical test should be developed through a comprehensive research program that involves well established methods of relating physical fitness to criterion measures important to the military like job performance, injuries, and attrition.

WHERE DOES THE U.K. STAND IN TERMS OF FITNESS TESTING?

To join the British Territorial Army, acceptance into basic training is dependent on performance on the **Basic Personal Fitness Assessment (BPFA)** consisting of push-ups in two minutes, sit-ups in two minutes, and best effort 2.4 km run under 14 minutes.[23] This test is similar to our CF EXPRES, for which all potential recruits have to pass before beginning basic training. After basic training, the British Army recruits have to complete the **Physical Selection Standards (Recruits) (PSS[R])**, which includes a 1.5 mile run, single lift and carry tests, and a four mile loaded march carrying either a 15 kg, 20 kg or 25 kg load depending on their chosen trade, with each test having five pass levels. Access to every post in the Army is dependent on the level of performance. These tests are "gender free." In addition, there is the **Infantry Combat Fitness Test (ICFT),** which requires marching a distance of three miles as a squad, each member carrying 56 pounds of kit including their personal weapon, timed to be completed in one hour. Individuals must stay with the squad, or be failed.

In 1998, after years of research,[24] the U.K. Army introduced the job-related gender-free physical standards (PSS[R]), which used an applicant's scores from three physical measures (height, mass, body composition) and six physiological tests (static arm endurance [SAE], back extension strength [BES], static lift strength [SLS], dynamic lift strength [DLS], pull-ups, and a Multi-stage Fitness Test and/or 2.4 km run time to predict future performance on four job-related Representative Military Tasks [RMTs]). The four RMTs were comprised of: a 1.45 m 25–45 kg ammunition box single lift (SL); a 1.45 m 10–22 kg repetitive lift (RL) for 7–20 minutes; a 60-180 m 2 x 20 kg jerry can carry (Carry); and an four mile loaded march (LM) carrying 15–25 kg, the required standard being dependant upon the applicant's chosen trade.[25] Since the introduction of PSS(R) in 1998, there have been many significant changes in the Common Military Syllabus for Recruits and recently a study was conducted to verify the validity of PSS(R) in light of these changes. The British researchers found that their predictive fitness test (PSS[R]) under-predicts performance on the jerry can carry and the single lift, and over-predicts performance on the loaded march with 20 kg.

The test had to be revised, and it was recommended that the elements which predict the jerry can carry be dropped from the test and replaced with performing the carrying task itself as an entry test, with appropriate pass standards. This study highlights the need for a rolling validation program for physical selection tools, especially when both the final performance standards required and the physical training program undertaken to reach those standards, is subject to continual modification.[26]

In 2008, British researchers attempted to find a link with performance on the 2.4 km run and the four-mile loaded march.[27] They concluded that for the least physically demanding march (15 kg), a 50 kg recruit needs to run 2.4 km in 13 minutes 38 seconds to have a 90% chance of passing the loaded four-mile march during basic training, while a 100 kg recruit needs to run 2.4 km in 16 minutes 29 seconds. This would require the British Military to set a higher standard on the run for lighter individuals, which would be very difficult to implement, and we return our thoughts to how heavier individuals are penalized when tested with traditional methods of exercises using only their body weight (such as push-ups and running), while they excel at the occupational tasks of load carriage.

In comparison with these Allies, Canada is ahead of the game since it has been using occupational tasks for its fitness test for years. This does not come without a price, as the duration of the test is longer, it requires equipment such as the trench dig boxes, and it does not allow for a competitive fitness test (such as comparing the number of sit-ups a unit can complete in 60 seconds). Moreover, it has so far proven un-executable for the Reserve Force due to lack of funding and time for training. It is, however, a valid assessment of the ability to perform the job, and considering the relatively small size of the CF when compared with those of the U.S. and U.K., the CF should continue to assess its soldiers using these methods.

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THE FUTURE OF THE CANADIAN LAND FORCE COMMAND FITNESS STANDARD (LFCPFS)

Currently, the CFPSA Human Performance and Research Development team is responsible for determining if the tasks incorporated in the current BFT (LFCPFS) designed in 1991 are representative of the physical demands for the LF of today.

The team has broken the project into four research questions:

- Is the fireman's carry still relevant as the method of casualty evacuation?
- Is the distance and load of the march still applicable?
- Is the assessment of field craft (dig a trench) still relevant?
- Are there any physical demands that the LF is facing that are not captured in the current LFCPFS?

TASK 1: IS THE FIREMAN'S CARRY STILL RELEVANT AS THE METHOD OF CASUALTY EVACUATION?

Casualty evacuation (CE) is a common physical demand found in occupational physical fitness standards.[28] Without an assessment of the physical capability to perform a CE, there is little confidence in a team that all team members will be able to rescue them in the event of an incident. Original research to develop the LF fitness test evaluated a sample of subjects on the fireman's carry component, wherein a soldier of "like size" was carried 100 m around a gymnasium in 60 seconds (determined by subject matter experts [SMEs]). However, during the past two years the research team had to determine: (1) the most common methods of CE currently employed on exercise and in theatre; (2) the performance of LF personnel conducting the CE; and (3) if there are fitness tests which would predict CE ability.

To determine the most relevant and common methods of CE, the team examined the most frequent methods employed to evacuate a casualty out of direct fire from the enemy. Recent reports from CF personnel indicated that a high frequency of casualties was sustained during convoy operations. This anecdotal information, paired with data from the Personnel Protection Systems Group—reporting as of October 2009 that 90% of those wounded in action (WIA) were injured in a vehicle—brought to the research team's attention that crewmen must be able to lift their injured counterparts and manipulate them through the hatches of the vehicle.[29] As current operations require elements of the combat arms and support trades to work and travel together in armoured vehicles, such as members from the Provincial Reconstruction Team (PRT) and Counter IED (C-IED) teams, the need to be physically capable of performing a CE from a vehicle is significant.

The results of interviews with SMEs (N=12) identified that, in theatre, vehicles were involved in 45% of CE scenarios and that vehicle extrication (VE) through a hatch was the most prevalent method of extrication. Dragging was utilized in 25% of incidents and the fireman's carry was not used. Observations on exercises across Canada in 2008/2009 identified that dragging a casualty (casualty drag [CD]) was the most common method for one soldier to perform a CE, and that the fireman's carry was not a method commonly chosen. Of 158 CEs witnessed, the majority were performed without a stretcher and involved dragging. Moreover, approximately one-fourth of all CEs involved a vehicle, with the majority of these incidents requiring extrication of the casualty through a hatch.

SME feedback confirmed research findings that a 25 m drag by the tactical vest is the most common first response CE method used in theatre and exercise. It was also confirmed that VEs should be assessed in the fitness standard due to the high prevalence of casualties inside a vehicle.

Therefore, the casualty drag (CD) and the vehicle extrication (VE) were the two most commonly observed and reported methods of casualty evacuation (CE), and for which a modification to the LFCPFS should test LF members' ability to perform both. The CFPSA administered research tests of performance on both these methods to a heterogeneous sample of subjects (N=118 LF members) to assess each individual's ability to perform to maximum:

- Vehicle Extrication (VE).
- Casualty Drag (CD).
- Predictive Fitness Tests (PFT)—seven fitness tests measuring strength and endurance of specific muscle groups: push-ups, grip strength, grip endurance, static squat, static row, wall sit, and vertical jump.

It was considered that performance on push-ups would not be related to performance on CE; nevertheless, because push-ups are included in the CF EXPRES and the APFT, the performance was measured in anticipation of questions from Army personnel relating to the relevance of push-ups as a predictive test.

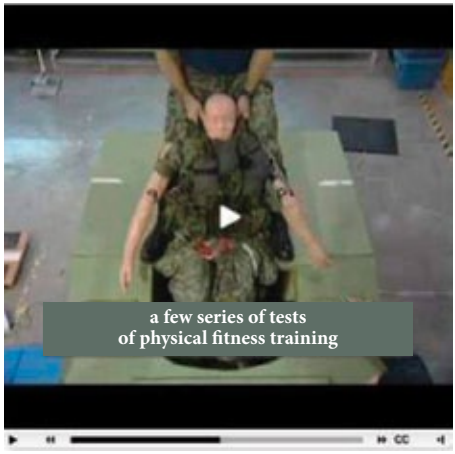
The average Canadian LF soldier has a mass of 82 kg without clothing.[30] Using this mass as a performance reference, the percentage of LF personnel who could recover this mass with a CD and VE

was measured. A mannequin of 82 kg could be recovered by 83% of subjects when performing a VE and 88% of subjects when performing a CD of 25 m. The research team recognized that fitness testing on vehicles was not practical, and determined that by combining a soldier's ability to perform the CD, grip strength and static squat, the ability to perform a VE could be predicted. Therefore, this phase of the research identified that if a member demonstrates that they can drag an 82 kg mannequin for 25 m by the tactical vest using a posture similar to that used when dragging humans, there is confidence that the member can also perform a VE. The Army expressed that for practical purposes soldiers will likely be dragging soldiers and not mannequins for this test; consequently, further research was performed and determined that the force requirements of dragging an 82 kg soldier on asphalt is equivalent to dragging a soldier weighing no less than 70 kg (154 lbs) a distance of 25 m on grass.

The following links to Army News provide videos of the fitness testing research process:
"Army test fitness levels versus field requirements"—
http://www.army.forces.gc.ca/land-terre/news-nouvelles/story-reportage-eng.asp?id=3255

"Drag rescue becomes new standard method for moving injured"—
http://www.army.forces.gc.ca/land-terre/news-nouvelles/story-reportage-eng.asp?id=4165

Army test fitness levels versus field requirements



Drag rescue becomes new standard method for moving injured

Or for more info please visit the website:
http://lfdts.kingston.mil.ca/ArmyFitness/protcol-eng.asp

TASK 2: IS THE DISTANCE AND LOAD OF THE MARCH STILL APPLICABLE?

It is fair to say that load carriage/marching remains a valid component of the LFCPFS. A recent survey of personnel at CFB Edmonton, CFB Valcartier, and CFB Shilo, showed that 63% of the 936 respondents indicated that they are marching **on base** *sometimes or more*. Additionally, the fact that only 39% of these reports came from combat arms personnel further affirms that most LFC trades are required to march on base, presumably for testing and physical training.

An interesting and somewhat unexpected point is that of the 352 respondents who reported marching *sometimes or more* in **theatre**, only half were combat arms personnel. These results indicate that 53% of respondents who had been required to conduct dismounted operations in theatre came from support

trades. A similar ratio of combat arms / support personnel reported marching *sometimes or more* **on exercise** (N=496). In addition, 51 CF soldiers who recently returned from Afghanistan reported that load carriage/marching in theatre was broken up into patrols of shorter distances than that of the 13 km LFCPFS, but performed with more weight.

To determine more specific requirements, the research team will be attending various dismounted exercises in Canada and equipping soldiers with small GPS devices to collect speed and distance walked over a number of days. To measure weight loads, soldiers will also be asked to carry a small, hand-held digital scale and to measure their rucksack load each day.

TASK 3: IS THE ASSESSMENT OF FIELD CRAFT (DIG A TRENCH) STILL RELEVANT?

The dig component of the LFCPFS seems to be the most resource intensive test component, since it requires the use of standardized dig boxes which may not be available at all CF Bases. In addition to the need to replenish pea gravel, the test standard requires specific pacing, as it stipulates that an individual must independently dig 0.486 m^3 of gravel from one standardized container to another with a standard shovel in 360 seconds or less.[31] It is important, therefore, that evaluators understand the research from which the test was developed and provide appropriate cues during testing. The 2006 IBTS indicate that a CF soldier must be capable of performing individual field craft, including a requirement that "all personnel must maintain skills with a shovel, pick axe, machete, and build and improvised shelter."

A recent report by Defence Research and Development Canada (DRDC)[32] followed training with 1st Battalion, The Royal Canadian Regiment (1 RCR), in a scenario including 2 Canadian Mechanized Brigade group (2 CMBG), the 3 RCR, and the Royal Canadian Dragoons (RCD). Soldiers were reportedly digging shell scrapes, (digging to Stage 2 and 5), as well as digging crawl and communication trenches. It was reported that "the sentry is relieved every 30 minutes so that he can take his turn digging the trench." This report indicates that preparing a defensive position required digging deep enough to provide cover for a prone soldier.

Results from the task analysis survey described previously indicated that very few respondents reported digging large holes "sometimes or more" in any environment. Seventy percent of digging reported in theatre was performed by combat arms personnel. Interviews with 51 soldiers who recently returned from Afghanistan indicated that 39 soldiers participated in digging on exercise and 28 participated in digging in theatre. Digging on exercise was primarily limited to digging trenches or shell scrapes and filling sandbags, compared to digging in theatre, which was described as being primarily for filling sandbags and building fortifications. Moreover, very few soldiers reported digging in theatre to build shell scrapes or trenches. More research is required to establish the fate of the dig component in the LFCPFS. Current opinion is that there may be a more relevant way to assess physical ability to perform field craft.

TASK 4: ARE THERE ANY PHYSICAL DEMANDS THAT THE LF IS FACING THAT ARE NOT CAPTURED IN THE CURRENT LFCPFS?

To identify changes in the physical demands of the LF over the past 20 years, it is important to consider changes in LF involvement in humanitarian efforts, peacekeeping, conflict resolution, counterterrorism, and wartime efforts, as well as training.

Under the direction of LFDTS, and with the understanding that through Lessons Learned training will reflect the demands of theatre, research began with an analysis of the physical demands of exercises across the LF. After attending exercises across the country (Wainwright, Petawawa, Kingston, Valcartier, and Gagetown), it became evident to the Human Performance Research Team that several training exercises were conducted in newly constructed "built-up areas" (to support fighting in built-up areas [FIBUA]). With further research, and through consultation with LFDTS and the Project Management Team (PMT), an investigation began into: (1) the prevalence of training for and conducting operations

in built-up areas for LFC; and, (2) the physical demands of a generic, skill-free simulation of an urban operations exercise for which all LFC members should be physically capable of performing.

Answering these questions required the research team to progress through the following stages:

- Construction of a working group of SMEs to aid in the development of the simulation.
- Observation of relevant urban operations in Canada.
- Construction of a generic/skill-free urban operations simulation.
- Measurement of the physical demands for a heterogeneous subject group to complete the simulation.
- Validation by the SMEs and verification of the pace of the simulation.
- Quantification of the physical demands of the simulation at the agreed pace (research is currently at this phase).
- Comparison of these physical demands to the demands already required for the LFCPFS.
- Presentation to the PMT and LFDTS of the results as to whether the current LFCPFS captures the fitness requirements of urban operations.

Stage 6 requires the measurement of the physical demands of the LFCPFS at the minimum acceptable pace. If the current LFCPFS does not test the physical demands of urban operations, then the research team needs to:

- Develop potential tests to be included in the LFCPFS that will physically tax the individual in the same manner as the urban operations simulation, without the demand for access to an urban operations site.
- Measure a larger sample of subjects conducting the simulation and the potential physical fitness test to compare the physical demands of each; ultimately therefore, to assess the validity of the physical fitness test.
- Assess the adverse impacts on LFC if the LFCPFS were modified to include this physical fitness test.

If the physical demands of urban operations are already being tested by the current LFCPFS, then it can be concluded that if one is capable of the LFCPFS they are physically capable of completing urban operations exercises without physical limitations. From the data obtained on Stage 4, which involved five four-person teams, it can be concluded that this particular simulation required very high physical demands, with heart rates reaching as high as 204 beats per minutes (bpm).

Photographs taken during the urban operations simulation in which metabolic demands (oxygen uptake and heart rate) were measured on the soldiers

CONCLUSION

In conclusion, the Canadian Army currently administers an occupationally relevant fitness standard, and yet an occupational standard such as the current Land Force Command Physical Fitness Standard (LFCPFS) must undergo constant review using only the most defensible methods to determine that appropriate standards are being applied. To ensure that the members of LFC are physically ready to meet the demands of performing their jobs, the Canadian Forces Personnel Support Agency (CFPSA) Human Performance Research and Development team looks forward to seeing its recommended changes implemented within the next few years, as was the case with the casualty evacuation component. Such changes help to provide a level of confidence within a team, prevents discrimination, and ensures a duty of care; fitness should not be a weak link.

In addition to future changes in the LFCPFS, the EXPRES will undergo review and revision. Recent discussions involving the three Environments suggest that the new standard (Fitness for Operational Requirements of CF Employment [FORCE]) should better prepare CF members for pre-deployment training and the current demands of operations. This research requires the continued measurement of the physiological demands of all CF occupations and the development of a valid, reliable, and sensitive occupational fitness assessment tool.

ABOUT THE AUTHOR...

Dr. Tara Reilly is the Human Performance Research Manager for Director General Personnel and Family Support Services (DGPFSS). Dr. Reilly is involved with research involving fitness standards for the CF and more specifically the Land Force. She achieved her Doctorate in Occupational Physiology in the U.K., which required the design and implementation of a fitness standard for the Royal National Lifeboat Institution (RNLI), with 233 lifeboat stations and 4,500 crew members. She was also responsible for developing a fitness standard for Surf Lifeguards in the U.K., as well as involved in developing fitness standards for the Offshore Oil Industry and the Coast Guard. Dr. Reilly has worked in the field of environmental physiology, emergency and survival physiology, ergonomics, as well as sports and exercise science. She also achieved a Master of Science (MSc) degree from Dalhousie University in Halifax where she worked in the Research and Development department at Survival Systems. Dr. Reilly is currently working as a part of a larger research team to develop the Fitness for Operational Requirements of CF Employment (FORCE) standard, and she will continue to suggest future modifications to the Land Force Command Physical Fitness Standard (LFCPFS), with the help of her Research Assistant, Ms. Simone Olinek, and the Army Physical Fitness Manager, Ms. Mary-Beth McGinn.

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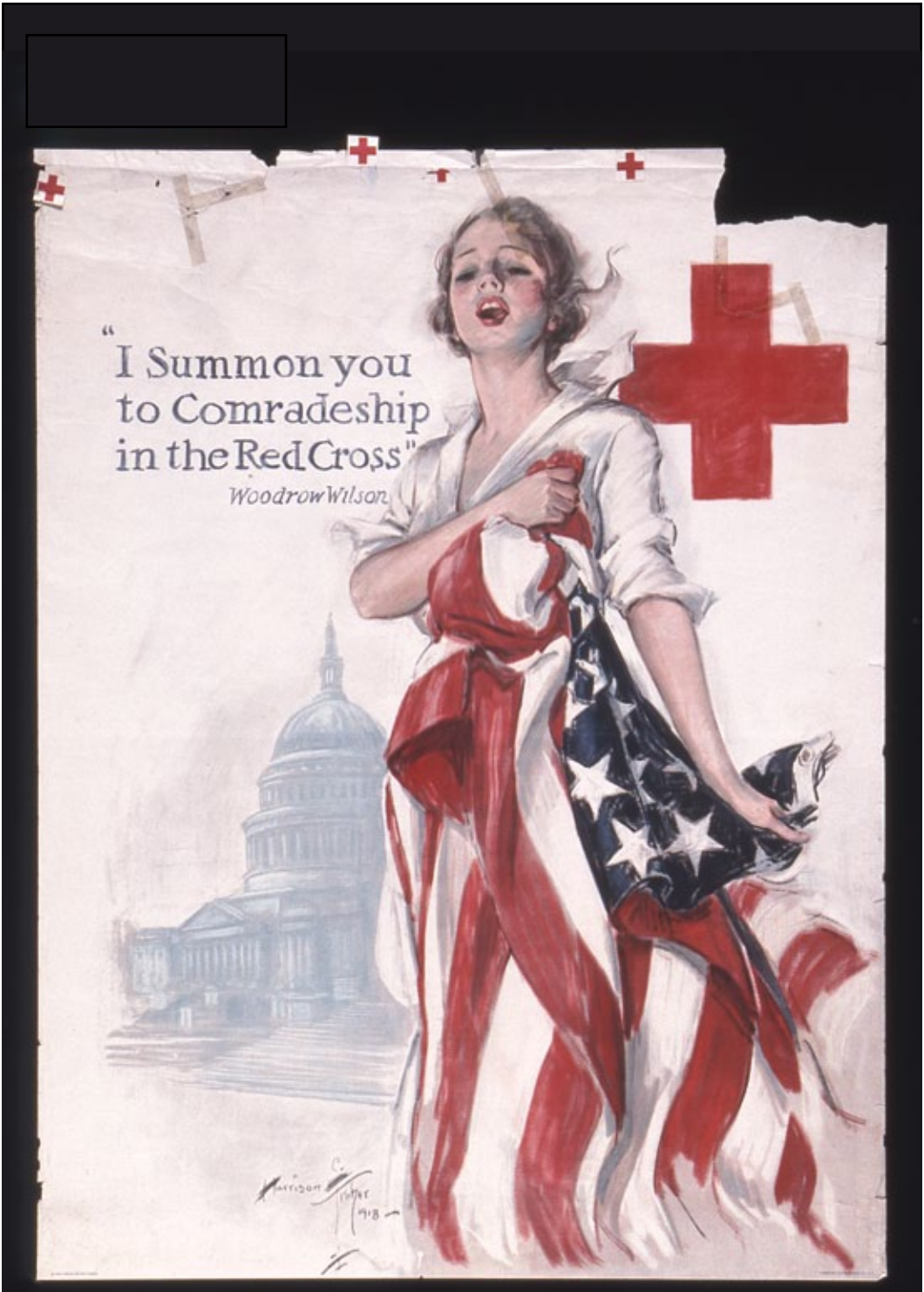

Source: 19780473-015 War time recruiting poster.

GENDER INTEGRATION AND MODERN MILITARY FORCES: A COMPARATIVE ANALYSIS

Second Lieutenant M. Rzechowka

The formal integration of women into the militaries of Canada and the United States has been a process spanning roughly 100 years. Initially restricted to trades that at the time were considered within the purview of female ability and social propriety, successive decades would gradually see gender restrictions rescinded to allow for a wider variety of "non-traditional" employments. The impetus behind integration was varied: sometimes political, sometimes rooted in need based on personnel shortages and wartime experiences. Each step was met with the resistance that inevitably accompanies change, though after a period of adjustment was retroactively acknowledged to be most successful. Both Canada and the United States generally kept pace with each other's efforts at gender integration—that is, until the issue of integrating women into the combat-related fields became part of prevalent public discourse, resulting in extensive debates on both sides of the border. This ultimately led to divergent military policies, creating two very different organizational working environments for North American military women.

In the late 1980s and early 1990s, both Canada and the United States sought to examine the possibility of extending gender integration to those military occupations that remained closed to women: combat support and combat trades. Influenced by both political pressures and the realities of experience inherent in operational theatres, each country took their own approach to study the corollary effects of allowing women to fight in designated combat units. The Servicewomen in Non-Tradition Environments and Roles (SWINTER) and the Combat Related Employment of Women (CREW) trials ensued in Canada in 1980 and 1987 respectively, while the United States formed the Presidential Commission on the Assignment of Women in Combat in 1992. Both venues were to investigate concerns regarding negative effects of integration on unit operational effectiveness. They were different approaches designed in their own way to examine the exact same debated concerns. Among military types, for instance, speculation was rife that women would damage cohesion and lower standards and were in general incapable of being and/or not ever meant to be in such environments. In each approach, there were certain limited similarities—notably the catalysing viewpoint of disproving the negative effects instead of examining the positive. For the most part however, the venues ultimately used markedly different methods to arrive at their respective conclusions. The evidence they gathered and their resulting conclusions changed the dynamic within each military, and continue to affect the conditions of today's Canadian and American militaries.

The initial (and very limited) efforts of the formal integration of women into the armed forces first appeared in both countries roughly 100 years ago and were focused near-exclusively on the medical field. Canada first employed nursing sisters during the North West Rebellion of 1885 and, in 1899, sent four women to support Canadian troops in the Boer War. In 1900, nursing sisters were granted a full commission as officers, with all associated authority and salary. The United States, while also employing women in the medical field during the Civil War (1861–1865) and again during the Spanish-American War (1898), would not formally admit them as uniformed military members until the later-half of the First World War.

It was not until the First World War that efforts to expand women's participation were made in earnest. Manpower shortages and conscription forced reluctant authorities to seek recruits in previously untapped pools. In a North American society so heavily influenced by Victorian/Edwardian norms, this was truly a bold endeavour. Not only were the militaries dealing with taboos with regards to their own traditions, there were also concerns with the general societal ordering of strict male and female roles. Women of the day were expected to restrict themselves to private matters, preserving their

own virtue and the sanctity of their homes—notions entirely incongruent with a dangerous, unconventional (and gasp! therefore potentially lascivious!) military lifestyle. Even though the trades open to women were restricted to those congruent with feminine roles, the military was not widely considered among either respective society to be a fitting endeavour for ladies. Despite a titillated and somewhat scandalized public, military recruiting campaigns brought forward a sizeable number of women eager to undertake the challenges presented and take the opportunity to serve their country. This sudden wave of interested women entering into the military should have come as no surprise, as it was anything but. Despite their formal exclusions from military organizations and organizations which believed that combat was the exclusive purview of men, women have long circumvented the barriers established to keep them out.

From times ancient to modern, women have been an undeniable, though often overlooked, presence in military affairs. The dominant discourse available regarding these issues focuses firstly on so-called camp followers—laundresses, seamstresses or cooks, for example.[1] When militaries deployed before the introduction of modernized logistical system, they often relied heavily on this support entourage to survive. Mainstream discourses regarding stories of heroic female warriors, however, are much rarer. On the few occasions where such examples are popularized, the women are often portrayed as individual exceptions to their gender. Two very prominent examples of such discourse in a Canadian context are Laura Secord and Madeleine de Vercheres. In tales recounting their heroic deeds, often just as much attention is given to their femininity and frailty. The implication is that they miraculously arose to the occasion and not that they were otherwise inherently capable of performing as soldiers. Their gender is hinted to be an impediment, which they managed to overcome along with the danger from the enemy, in order to be successful in a soldier's tasks. Their foray into military activity was tolerated, and even cautiously celebrated, because their actions were seen as an anomaly in response to extraordinary circumstances. Essentially, they temporarily took on the traits of a man, because women as a gender group were seen by nature incapable of military engagements.

This notion of military as the exclusive domain of the male is easily disputed with a myriad of historical examples the world over. Linda De Pauw, a leading feminist historian, details in her book, *Battle Cries and Lullabies*, that many women from a variety of cultures, backgrounds and time periods were drawn to the military lifestyle.[2] Inevitably, these women often found ways around the precluding stipulation of sex and gender in formal and informal military bodies. Cross-dressing was one tactic often employed, with instances occurring from antiquity (the Trojan War with Epipole of Carystus reported to have joined the Greek Army), to the Napoleonic Wars (Joanna Zubr [Polish], Nadezhda Durova [Russian] and Anna Luhring [German], the first two were decorated war heroes) to the American Civil War (with cases such as Sarah Emma Edmondson, Rosetta Wakeman and Loreta Janeta Velazquez being so prevalent, women successfully argued the right to participate in Civil War re-enactments).[3] As long as the façade remained uninterrupted and glimpses of their true gender remained hidden, they were accepted into the ranks without issue.[4] The aversion to the feminine gender in the military flared up if their true sex was ever revealed. Even though such revelations were commonly on account of treatment for injuries accrued in combat, exposed women were almost without exception ostracized and forcibly thrown out of their units. Their proven battle abilities ceased to matter in light of their gender.

Where circumstances allowed, there were also instances of women successfully becoming warriors in full light of their gender. Individual women managed to achieve success as military commanders, such as Boudica, queen of the Brittonic Iceni tribe, who was chosen to lead thousands into battle against the Romans circa AD 60 are prevalent individual examples, but examples of groups of women participating in combat are also easily identified. As in the case of the Mexican Adelitas, some took advantage of their proximity to combat as camp followers and used it as a steppingstone to eventually go on to fight alongside the men, becoming an integral part in the armed struggle against the Mexican government forces.[5] The existence of the Soviet Battalion of Death and the "Night Witch" air regiment, respectively an

all female Red Army infantry unit and night bomber unit, active during World War II further illustrates instances of women willingly joining and thriving in military environments that transcend time and culture. As Bibi Ayesha, the only female Warlord in present day Afghanistan, was fond of saying, "It makes no difference if you are a man or a woman when you have the heart of a fighter."[6] Despite countless existing examples of female combat participation throughout history (both overt and covert), conventional understandings of traditional gender roles in warfare still prevailed, inhibiting the option of widespread gender integration in formal military structures for centuries.[7]

These social conditions remained until roughly the First World War. Such understandings of societal order prevented women (openly as women) from joining the ranks of any military unit in Canada and the United States—that is, until necessity forced the issue to be re-examined. It would show how intimate the influence of the society was on the military and vice versa. At a time when social conventions still very much restricted women to "proper" activities based on the domestic sphere of feminine roles, the operational needs and requirements of the World Wars prompted the various western militaries to discount convention (to varied extents) and seek recruits from a willing and available workforce of women in order to address critical manpower shortages. Necessity in one venue forced changes to norms with regards to gender integration, but only for a short while. In Canada, despite almost 2,000 female military nurses deploying overseas and 43 loosing their lives, upon the conclusion of the First World War no further efforts to integrate were made until necessity forced the next round of recruitment with the Second World War.

This time, the employment of women went above and beyond the roles traditionally held as "acceptable." Starting in 1941, both Canada and the United States authorized large-scale recruitment of women into their militaries. Auxiliary services (Air Force, Army then Navy) were created. Thousands of women jumped at the opportunity to serve at home and overseas as medics, ambulance drivers, mechanics, clerks and so on. Recruitment posters encouraged smiling, confident women to join up in a "Victory Job." The corollary controversy of employing women in non-traditional roles, creeping ever closer to combat (and closer to men) was met with no small amount of resistance both inside and outside of the military.

Public discomfort was prevalent and resulted in a certain amount of backlash. Most commonly, the decency and morality of women choosing a military lifestyle were openly called into question by members of the general public, as well as some military men, on both sides of the border. To mitigate this, the military attempted to tackle some of the concerns head-on. One of the entrance requirements for women applying was "being of good character." In hindsight it was perhaps an odd stipulation, but it is extremely relevant to shedding light on the not so subtle mainstream opinions of the kind of woman who would volunteer for military service. In Canada this manifested in the so-called Whispering Campaign of 1943, which caused a sharp decline in recruitment efforts.[8] Rumours accusing military women of everything from spreading venereal diseases to straight up prostitution were prevalent in media discourse. The Canadian and American militaries did what they could to mitigate such falsehoods and disapproval by endeavouring to heavily regulate gender interactions. For appearances sake, they forced women to wear designer uniforms and feminine skirts in lieu of pants to emphasize their enduring femininity (until requirements in the field finally put a stop to it).[9]

Practical experiences following the recruitment of women empirically disproved many of the prevalent misconceptions. The acceptance of women into certain trades provided the opportunity for exposure to the military that wholly agreed with many women. Many women found that they thrived in a military setting and thoroughly enjoyed the discipline, rigour, challenge and adventure that it presented. There were even a few notable examples of exceptions to the strict restriction of women from combat support trades in western militaries, such as with the British Auxiliary Territorial Service (ATS). The ATS, an anti-aircraft gun artillery unit charged with defending Britain against German bombers in the Second World War, became the first example of a formally integrated combat support unit.[10] As Gerard de Groot

outlines in his piece "I Love the Smell of Cordite in Your Hair," concerns about cohesion, ability and sexuality were also strong points of contention when deciding whether to integrate the ATS, as they had been all over the military. In the end, necessity won out and women joined as fully integrated members of the unit—with one exception. They were allowed to participate in all unit functions other than actually firing the guns. It was not that the women of the ATS units were not physically capable of firing the guns, as minimal pressure on the triggering device is all that was required. Nor was it the case that they did not want to do it—many women lamented this restriction as wholly unfair. The women of the ATS were the victims of ardent beliefs held by both the military and society that although necessity had led to the integration of women into certain trades, women could not, and should not, be employed in a combat capacity (especially as a direct corollary to killing).

Practical experience showed that strong leadership and strict policies were the keys to quickly mitigating any issues stemming from integration, such as animosity from the male members toward the women. Just like many of their sisters-in-arms, women of ATS loved being part of ATS, and after a short adjustment period, most of the men they worked with were appreciative of their presence. The integration experience, or "Great Experiment," had proven positive. Upon the conclusion of the war however, it was assumed that women would simply return home, leaving their foray into military endeavours in the past. The effort was not made to incorporate it as a norm, and this would result in several steps backwards for military women before the conditions once again allowed them to move forward.

Demobilization plans aimed at force reduction were drawn up before the end of the war. Most military women would bear the brunt of these efforts and soon find themselves forced out. After the Second World War, most of the women's auxiliary units were disbanded in both Canada and the United States, and integrated units returned to their singular gender membership.[11] Restrictions were put in place on the number of women allowed to serve at any given time, and certain positions, which they had filled during the war, were no longer available to them. Both countries, however, faced considerable opposition to this marginalization. Canadian women began serving permanently in 1951, three years after the *American Integration Act*.[12] The *Women's Armed Services Integration Act* was brought into force in 1948 allowing American women to permanently enlist in the United States.[13] At this stage, both countries employed women in administration, logistics, medical and communications roles—at the service support levels. This was seen as a step in the right direction, but increasingly, demands surfaced to push for more. Pressures mounted for progressively further integration of women in Canada and the United States from military women, second wave feminist organizations and human rights groups.

The pressure for normalizing integration was critical at a time when the militaries were still figuring out how they wanted to employ their women. For instance, in 1964 the Canadian Chief of the Air Staff decided that he would "phase out" female personnel from the service. Thankfully, the mid to late 1960s became a period of mounting outside political pressure, especially for the Canadian military. In 1965, the publication of the *Minister's Manpower Study* served to tackle rampant beliefs of traditional objections that men had to serving alongside women.[14] In 1971, the *Royal Commission on the Status of Women* made a series of policy recommendations, many of which were gradually adopted. Polices which restricted married women from joining were rescinded in Canada, as was the policy of mandatory release for pregnant soldiers. Ceilings on rank and maximum numbers of serving women were removed. Enlistment criteria were also standardized (the "good character" stipulation removed, as it was never a listed demand for men). The sole recommendation rejected, however, was the suggestion to rescind gender restrictions for all trades.

The United States kept pace, with many similar integration initiatives being adopted around the same times. An additional factor propelling gender integration in the United States was the draft ending in 1973, which created an all-volunteer force with increased employment opportunities for women. In 1976

and 1980, West Point and the Royal Military College of Canada respectively began admitting women into their cadet corps. At this stage, integration was still limited to support trades—combat and combat support trades remained unequivocally closed to women in both countries. Women were still restricted to more traditional occupations. Realities inherent to operations, as well as shifts in societal norms propelled this prohibition into debate, bringing the issue of complete gender integration in the military increasingly to the forefront.

In Canada, the next step for the integration of women into combat support trades came as a result of the *Canadian Human Rights Act* in 1978. The Chief of Defence Staff, General Robert Hilborn Falls, directed that past reasons for restricting women from these trades had to be re-examined, as in the absence of a bona fide occupational requirement to prevent it, such practice was now illegal.[15] The controversies surrounding what could or should be constituted as bona fide occupational requirements to prevent women from integrating into combat support or combat roles were variations of the same concerns cited during previous historical efforts towards integration in both Canada and the United States. There was worry about physical ability—in relative terms, women are smaller than men and have less muscular and aerobic capabilities. The potential for perceived lowered physical standards was especially alarming in the context of intensive combat situations. Concerns abounded about women's ability to perform in aggressive environments, including their "emotional suitability." Western norms of social order were also invoked, which called for men's protection of women and women's duties to the family. To place women in combat related-roles would have caused an upheaval to the fundamental principles of Canadian and American societies. Not only would men be more likely to rally to protect the women in their units, but they might also be unable to do so in a prisoner of war situation, thereby unnecessarily damaging morale even further.

There were also many concerns about the threat of sexuality inherent in the addition of women that would have been introduced to previously all-male combat units. Sexual activity among unit members was seen to lead to dysfunctional relationships, which would damage unit cohesion. The threat to men's fraternal bonding was also a concern that accompanied the introduction of women into combat units. Fraternal, non-sexual bonding among male unit members was seen as the essential ingredient to that unit's cohesion. Cohesion, though dubious regarding specifics on how best it was attained and why the presence of women would absolutely disrupt it, became inextricably linked to combat effectiveness. And combat effectiveness was the difference between military success and failure. Citing concerns for combat effectiveness gave individuals using the somewhat ambiguous concept of cohesion as justification against gender integration the advantage of added legitimacy—anything that remotely endangered combat effectiveness endangered military operations and personnel.

In the early 1980s, the question of allowing women into combat related roles took on an increased importance, for largely political reasons in Canada and for largely operational considerations in the United States. In the American military, women were deployed as integral parts of operational forces to both Grenada in 1983 and Panama in 1989. Though no women were formally acknowledged to have taken part in what was classified by the Department of Defense as "direct combat," (an ambiguous and often subjective classification), several female American pilots flew transport and medical evacuation missions directly into combat zones.[16] US Captain Linda Bray led soldiers into ground combat, successfully taking a well-defended Panamanian police post during the invasion of Panama.[17] She was the first female officer recorded to have officially done so in the US Army. The combat nature of her mission, however, was denied after the fact by the President's office, which stated that the Department of Defense would continue to uphold combat exclusions for women (despite empirical examples of their success). As Cynthia Enloe details in her book, *The Morning After*, the media and the American public were less certain, and the continued gender preclusions seemed increasingly artificial in light of real operational experiences.[18]

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In Canada, there were no such practical examples to ground the issue of gender integration. In an attempt to create such conditions in order to examine the effects of proposed employment of women, the 1978 "Service Women in Non-Traditional Environments and Roles Trials" (SWINTER) trials were established. SWINTER's purpose was to examine the implications of integration with regards to operational effectiveness, potential conflicts between individual rights and national security, physical aspects, differential costs associated with infrastructure modification and supply, and perceptions of service people and their spouses. The trial objectives were extremely broad. For instance, one was designed to assess the "behavioural and sociological impact of servicewomen on trial units, including the sociological impact, if any, on the immediate families of the personnel at trial units."[19] One military officer recalled her experiences with SWINTER and this clause, classifying it as the "kitchen sink" clause—any dissent from the men or even their wives[20] regarding their own perceptions of the negative impact of these women could then aid in arguing that a bona fide occupational requirement existed to prevent integration. Using such all-encompassing criteria that needed to be met as measures for success unfortunately also led to a wide array of opportunities for subjective, idiosyncratic dissent.

Each element was given the task of creating and testing their own trials, and each came up with a varied range of results. The most successful would eventually prove to be the aircrew trial, though it was not without its critics. Lieutenant-Colonel Carl Fitzpatrick playfully remarked that the height at which eyebrows would be raised in response to the first female pilots training at Canadian Forces Base Portage la Prairie would result in North American Aerospace Defense Command spotters sighting tiny, fuzzy unidentified flying objects.[21] A cute observation that reflected the very real scepticism associated with this newly proposed level of gender integration, which was experienced across the services. The women's performance as pilots for instance was acknowledged to be up to standard, yet Air Command recommended their continued exclusion from pilot trades, stating that in their opinion, a pilot could not be a pilot in the Canadian Air Force if they were excluded from combat or near-combat missions.[22] If, however, their recommendation was not heeded and women were allowed further integration, the recommendation of the Air Force was then to rescind *all* restrictions.

The aircrew trial was unique in the way that it recruited and chose women specifically for those positions. The other commands (Navy and Army) mostly plucked existing female members out of service support units and parachuted them into the trades in question as test subjects. The end results of this approach were decidedly less successful than they could have been due to the way the trials were executed—the SWINTER women were not expressly recruited with their new trades in mind, automatically posing a disadvantage. Often, the women directed to participate had no real interest in doing so. These women were often ill prepared, lacking the training and elevated physical standards necessary. The military was criticized of approaching the SWINTER exercise with a less than whole-hearted commitment to set conditions for a fair chance at successful trials from the outset.[23]

With all the issues abounding around SWINTER, it is also important to note that there were some distinctly positive outcomes and feedback as well. Men in the trades had a first-hand opportunity to interact with their female colleagues. Their experiences helped to disprove some of the concerns regarding the damaging effects of integration on unit cohesion. The negative effects of integration came up primarily during the lead up to integration and then again immediately following the introduction of gender integration.[24] Lieutenant-Commander Gil Morrison, Captain of the HMCS Cormorant, predicted this to be the likely sequence of events, stating that men were likely to have a difficult time accepting women in jobs that had previously been theirs alone. After a time however, "the initial shock period is over, they'll get on with the job."[25] True to the Lieutenant-Commander's predictions, after a reasonable adjustment period there was in most cases no observable difference in cohesion. In fact, integration was often found to cause an increase in professionalism and higher job performance because it promoted a healthy dynamic of competition and overall respect within the unit. Many women also found supporters within the units, which were not only tolerant but in fact very encouraging of their employment choices. The results in these cases were not unlike those noted during the British Second World War experience with the mixed ATS units.[26]

Positive experiences aside, the Directorate of Equal Opportunity Policies and Plans pointed out in a paper they published in 1998 entitled *From the Past and into the Future: Gender Integration in the Canadian Armed Forces 1970–1999,* that the trials were "not the definitive trials envisioned due to the restrictions under which [they] were run."[27] The data was of limited use due to several mistakes in the methodology such as:

> *… lack of central control of the trials, the limited number of participants, uncertainties as to the goals of the trial by participants, the subjective assessment of performance without a comparison framework and a requirement to extrapolate limited data into different situations … .*[28]

These were all accurate critiques. The final recommendations were approved by the Chief of the Defence Staff in 1986 and included the continued exclusion of women from combat-oriented vessels and aircraft, as well as combat support units. SWINTER data would eventually play a small part in the next phase of Canadian Forces gender integration initiated in 1985, but their utility and enforcement was limited by a preceding parliamentary ruling.

In 1985, the "equality rights" section of The Canadian Charter of Rights and Freedoms came into force. It placed an outright ban on any sort of gender-based discrimination regardless of field. In response to the law, a Parliamentary Subcommittee recommended the removal of all barriers preventing women from employment in any trade within the Canadian Forces.[29] A task force within the military was then stood up, and in 1987, it announced the commencement of the Combat Related Employment of Women (CREW) Trials. The Canadian military developed a trial research plan, conducted surveys both within and outside of the organization and proceeded to the test phase. The purpose of the trials was to examine

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the impact of gender integration on combat effectiveness in the remaining trades restricted to women: infantry, armour, artillery, engineer, field signal and intelligence units, fighter and tactical helicopter pilots and all deployed positions on combat vessels.[30] Once again, experiences across elements were varied

The Air Force announced shortly after the commencement of CREW that they did not require additional testing and immediately rescinded all employment restrictions for women. Trials proceeded in the Army and Navy, though not without incident. Animosity was expressed outright at 1 Canadian Brigade Group in Calgary, where the working atmosphere was described as hostile between genders.[31] Units at CFB Gagetown, a base that had a fairly extensive history of training women, experienced little issue. CFB Petawawa, which did not share this integrated experience, retained scepticism. Harassment was pervasive as the system had yet to establish mechanisms to both deal with and stop it. Prejudices abounded based on false impressions of lower expectations and minimum quota levels of employment numbers. Programs had to be introduced to deal with the increases in workplace harassment. Eventually however, the process of gender integration into combat units ran with increasing smoothness for Canadians.

The adjustment period before acceptance was in sync with the theories of G. Resch, a psychologist specializing in issues of integration that were used to develop the CREW research plan. He described integration as not a gendered issue, but as one of leadership. It was up to leaders at all levels of the unit to facilitate positive change.[32] He reported that attitudes need not start out receptive, but that they would change, given time, guidance, instruction and training. There may be an increase in negative attitudes and opinions towards the integration as the issue is raised, or as the process begins. Once integration takes place, there is a period of rapid adjustment, where unit members are surprised about the "ease of adaptation."[33] Shortly thereafter, cohesion is restored.

Years later, this analysis proved to be highly accurate. Gender integration in Canada eventually yielded an improved, more diverse and highly combat effective Canadian military force. Issues surrounding the perception of the high costs of infrastructure modification, such as refitting vessels to accommodate women, were minimized by good planning and common sense solutions. Lingering frictions between unit members became eminently solvable problems and programs were introduced to deal with some of the more persistent problems of harassment. Romantic-type relationships developed between soldiers, but were left to the purview of leadership to ensure that they did not have a disruptive effect on unit dynamics. Common sense, sound policies and good leadership were heralded as the ultimate solution to the problems that did arise.

In 1989, the Canadian Human Rights Tribunal ruled that all trades in the Canadian Forces were to be opened up to women, stating that the continued exclusion of women from male combat arms units was an "occupational requirement [that] no longer has adequate evidence to sustain it."[34] Without any evidence to support the continued exclusion of women, the policy became blatantly discriminatory. All gender-based restrictions were, therefore, to be removed immediately (with the exception of submarines and Roman Catholic padre trades, which the tribunal felt had grounds to argue in favour of remaining male only). CREW was not discontinued, but its function changed to instead prepare the way for larger scale integration across the CF until it concluded in 1992.

Throughout the periods of SWINTER and CREW in Canada, the United States military was also embroiled in similar debates surrounding the issue of expanding gender integration to near-combat and combat trades. In contrast to the Canadian catalysts for gender integration into combat units, which were near-exclusively political, the American debate was spurred by operational realities and true-to-life examples of women in the most arduous of combat conditions.

The First Gulf War in 1990 brought the issue of military gender integration once again to the front and centre. Colonel Kelly Hamilton remarked that "the conflict was an awakening for the people in the US … they suddenly realized there were a lot of women in the military."[35] The nature of the Gulf War also signalled a need to re-examine what it meant to be "in combat," and who it was that would be placed in that situation. During the early stages of the Gulf War, women were not technically banned from ground combat. They were, however, subject to service restrictions and policies, which precluded them from being in units seeking to initiate contact with the enemy. Each service (Army, Navy, Air Force and Marines) had slightly differentiated ideas of what "in combat" meant to them, though in general they

adhered to the so-called Department of Defense "risk-rule" to guide the placement of women, which stated:

> *Risk of direct combat, exposure to hostile fire, or capture are proper criteria closing non-combat positions or units to women, when the type, degree, and duration of such risk are equal to or greater than the combat units with which they are normally associated within a given theatre of operations … .*[36]

The rule was designed to guide the distinction between combat and non-combat units, and to reduce the likelihood of women being exposed to direct combat—something the American military would rather avoid. Employing the risk-rule, however, was increasingly difficult to do. This conflict would be only one of many to come where there were no longer clear distinctions between "the front line" enemy engagements and behind the line, non-combatant support roles. The operations could go from non-kinetic to kinetic without notice. Supply convoys for instance, often manned by both sexes of a gender integrated support unit were common targets for small arms ambushes and improvised explosive devices attacks, and transport aircraft were often the target of enemy fire. So despite the stipulated limitations, there were many women engaged in combat at all levels of the operation throughout the Gulf War due to the nature of the operation. They fought, and fought very well, some suffering serious injuries and others losing their lives to enemy fire. Of the 148 American casualties from Desert Shield and Desert Storm, 16 were female. Two women were taken as prisoners of war.

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Leading Seaman Mandy Dagenais and Ordinary Seaman Kris Correa prepare demolition charges to destroy a simulated mine during pouncer operations in the Gulf of Oman

These were the operational experiences that led to mounting political activism to pressure both Congress and the American public to revisit the stipulations preventing gender integration of combat units in the military. Congress proceeded to pass an amendment to the *Defense Authorization Act* in 1992, which repealed the restrictions on women in combat aircraft. When the amendment made it to the Senate for approval however, it was met with still larger resistance. Senator John McCain, among those resistant to removing restrictions on liability for any servicewomen, proposed instead that a commission be created to thoroughly examine the issue of women in combat units. In 1992, the Presidential Commission on the Assignment of Women in the Armed Forces was created in response to his proposal.

The Commission's enabling statute required it to "assess the laws and policies restricting the assignment of female service members."[37] The American Commission was made up of a mixture of senior officers, former service members, currently serving members, subject matter experts and civilians with relevant experience: 15 in total. Six of the commissioners were women and eight were currently serving or retired members of the American military. These individuals were tasked with conducting field interviews with military members and relevant stakeholders. This proved to be an extremely extensive list and included everyone from past or presently serving military members, experts on military affairs and sociology, community organizations, religious organizations and even simply concerned Americans citizens. The parameters for evidence quality, relevance or source were not explicitly outlined, but it came up with a list of 17 issues from which the commissioners would eventually vote and submit recommendations on.[38]

The issues of primary concern dealt (familiarly) with the risk of capture, western norms guiding men's treatment of women, women's physical capabilities, dysfunctional [sexual] relationships and, of course, that perennial question of maintaining unit cohesion. Curiously, the Commission's approach of gathering individual testimony was given the greatest weight in the decision-making process. Structured trials were not employed to assess potential impact. At the outset, this seemed an acceptable approach, given that the experiences of the over 40,000 women who served in the Gulf were one of the first mentions in the introduction of the report. Real-time experiences had perhaps made trials unnecessary to the Commission—there was no need to attempt at manufacturing combat related trials when it was the case that organic data already existed on the professional performances of American military women, so they focused on gathering supplemental materials.

This performance throughout the First Gulf War was explicitly lauded as having met the "highest standards of military professionalism during a watershed period in [their] nation's history."[39] The spirit of this statement, however, resonated less as the report went on. A section entitled "The Case Against Women in Combat," for example, attempted to wipe away the significance of not only specific examples of women soldiers engaged in the Gulf War, but also historical examples of women as combat soldiers in general. For instance, the section presented the argument that gender integration was completely dissimilar to racial integration that took place in 1948—unlike male soldiers of differing races a "proud history as successful warriors exists among [these] men of different races, but not among women."[40] Historically, this is woefully inaccurate, and could only hold a semblance of weight when applied in the strictest and formal sense. As detailed previously, the American military women had often adopted male dress and gone to enlist—even with distinction. That is to say nothing of countless other women who had found a way to participate in various military combat all over the world throughout various points in history. In a more modern western context, the formal military organizations did not provide an overwhelming number of examples of women warriors. However, to use this previously imposed restriction as proof for the sound rationale of continued exclusion is a logical fallacy: *Post hoc ergo propter hoc*. This mistake would have met the swift disproval of any professor of formal logic, yet was astoundingly admitted into the Commissions record as legitimate evidence supporting gender segregation.

Women, it was stated, had not met the burden of proof required to assert their claims of being suitable for combat unit integration into ground forces. This was despite their acknowledged top-quality military performance in the Gulf War. Commissioners and witnesses proceeded to argue that centuries of (exclusively male) military experience could not be discounted simply for the individual ambitions

of a few (women). The Commissioners who raised said objections did not go on to outline how women could hope to meet a suitable level of proof, or even what that proof would consist of. Proof citied from other countries' experiments with gender integration tests were dismissed as inconclusive for their issue of integration. The Danish military experience for example, which successfully integrated 1,000 woman into combat roles, was dismissed it as "too limited" to be a conclusive factor for drawing operational conclusions.[41]

The less than beautifully executed SWINTER trial results also reared up again when the Commission went on a fact-finding trip to Canada in order to gauge our experiences with integration in non-traditional roles. They noted that the experiment had been a failure, with only one of the women having been able to meet the physical requirements. This soldier was then posted out of the unit, reportedly because the male soldiers were "too immature for her."[42] Despite admitting that these results were most likely a direct result of the failure to pre-screen candidates and confirm their preparedness for the task at hand, the Commission seemed satisfied that only two factors (not yet standardized physical requirements and "bonding") had been enough to eliminate over 100 women from integrating into all-male units.

The report criticized the Canadian experience for placing concerns regarding equal opportunity above concerns for operational readiness or unit effectiveness, since they felt no credence was given to SWINTER findings, which had warned that "difficulties would be anticipated."[43] What they neglected to mention was that the SWINTER findings had advocated upholding the status quo despite empirical evidence (as was the case with female near-combat/combat pilots), and due largely to unsubstantiated conjecture. By 1992, the horrible fears regarding the collapse of cohesion and combat effectiveness sure to follow the integration of women into previously all-male trades all but completely subsided, as it had indeed with previous historical initiatives of military gender integration on both sides of the border. As Majors Nicholas Coppola and Kevin G. LaFrance argued in their in their *Military Review* article "The Female Infantryman: A Possibility?," the Commission insisted on deferring to cohesion / inappropriate relationships and unit morale as the pre-eminent concerns against women in combat related trades despite there being no credible data to support such an assertion.[44] In fact, directly related to credible data used by Canadians and glossed over by Commissioners suggests that cohesion was largely a leadership issue, and would only be interrupted for a short while the changes in question took place.

Removing gender restrictions for pilots was the issue that had spurned the Commission. It was also one instance where the integration of female pilots into combat aircrew had unquestionably met the abstract and elusive "burden of proof": women had excelled in combat aircraft training and had flown superbly in non-combat missions. Concerns about physical differences between genders were also a virtual non-issue for pilots in the Air Force. The Commission confirmed there was no evidence found to restrict women from combat aircraft based on physiological considerations in its section on combat aircraft.[45] Yet despite such conclusive findings, the issue was also weighed against individual testimonies. One of the panellists invited to give testimony was Navy LT John Clagette, a Top Gun instructor. He stated that though women did fly F-18s at the school, they were "of course" prevented from training for combat missions. He concluded that to put them into such a role "[was] just ludicrous."[46] Substantiation for his statement was nowhere to be found—not in his testimony, not in the Commission's report and not in any relevant documents since then. Yet the voices of dissent, such as those of Clagette, were given weight in deliberations despite overwhelming empirical proof of ability. The Commission ultimately voted against upholding Congress's decision to rescind the ban of female pilots in combat aircraft, though Secretary of Defense Les Aspin chose to eventually rescind the rescinding of the original rescinding (and open up other then restricted trades as well).

The Commission acknowledged that there was no question women "could" do the job of a fighter or combat helicopter pilot, but ultimately the question came down to "should they." The controversy surrounding "should" in this case encompassed apprehensions regarding the treatment of women

in prisoner of war (POW) situations. The risk of capture was indeed increased with fighter aircrew. The Commission also heard testimony outlining the brutal treatment of POWs during Vietnam. It made reference to the case of a female American POW who was shot down during the Gulf War and "indecently assaulted."[47] That conditions for POWs were wretched should have come as no surprise, but the expressed purpose of choosing to stipulate this fact alongside with the concerns of employing women as combat pilots was clear: the conditions are such that they are almost too horrible to bear for men. They are, therefore, almost certainly unbearable for women. The additional threat of sexual abuse was meant to cement the legitimacy of concerns used in order to prevent integration.

Evidence given by the Joint Services Survival, Evasion, Resistance and Escape (SERE) Agency, the body that studies the conditions of POWs and uses the accumulated data to train individuals for capture scenarios, completely disproved of the notion that there is a difference in POW coping based on gender. They also denied the existence of evidence that would support the idea that a male soldier captured with a female would have a "worse" experience because of it.

The threat of sexual abuse also came up several times as a concern. Paternalistically, it was brought up repeatedly by the men on the Commission, and not at all by the serving women. Eliminating "the threat of sexual abuse of captured U.S. females was impossible."[48] With this statement, sexual assault was implicitly denied as a possible occurrence for male POWs by the Commissioners, and indeed, this was the version they were trying to sell. The panel went so far as to cite evidence that from present day, going back as far as Vietnam, no man had ever reported sexual assault in captivity.[49] The lack of reported incidences, however, should not have been taken as definitive proof of its absence.

In reality, the sexual assault of males in captivity was and is known to be quite commonplace; though due to cultural aversions and taboos, male survivors tend not to willingly speak openly of it. Such was the case with the Royal Irish Ranger soldiers captured by the West Side Boys gang in Sierra Leone in September of 2000.[50] Though sexual assault perpetrated by male gang members was alleged to have occurred in this incident, the consideration for such possibilities erroneously do not pervade for male soldiers. Sexual violence in war is often not an exclusively gendered crime—rather, it is more associated with the power relationships that accompany the captor/captive power dynamic. Female soldiers tended to view sexual assault as a potential consequence of their chosen profession, but not one that would hamper their ability or will to deploy on operation. Theirs, however, was the vulnerability needing protection.

An interesting case study the Commission made mention of was actually the living embodiment of several concerns surrounding integration, including fear of sexual assault. Major Rhonda Cornum, a flight surgeon, was in a helicopter that was shot down by enemy fire whilst flying a rescue mission into hostile Iraqi territory. An extremely well educated woman, she was already working towards her medical degree when she had decided to join the Army because she was drawn to the military lifestyle and relished the challenges it presented. She graduated from her flight course, and applied for a flight surgeon spot with the 82nd Airborne Division, admitting that her personality was better suited for gunship aircraft.[51] She was denied an Airborne position on the grounds that that the position was a combat slot and was therefore closed to women.

The crash she survived had killed five of eight of her helicopter crewmembers. Believing she was the only living crew member left, it would be days before Major Cornum re-encountered fellow American soldier Sergeant Troy Dunlap in captivity. She recounts of how the two, simply happy to be in the company of a compatriot, regardless of rank, trade, and yes, even gender, defied each other's expectations. At one point, Sergeant Dunlap turned to Major Cornum and remarked at her bravery. She replied, "What'd you think I was going to do, cry or something?" "Yeah, I guess I thought you were." "Well, that's okay. I thought you were, too."[52] This exchange is but one example of how remarkably well Major Cornum did in captivity, even despite being sexually molested not long after her capture on the way to Basra. Her reaction was notably one of disbelief—she was dirty and broken, surely this man could do better? Though she was admittedly disturbed by the assault, she recalls thinking that, of all the things that were

happening to her, it really was not the highest on the list of things she worried about. These were not the thoughts of a desperate and panicky woman, but a well-trained, professional and still incredibly good-humoured officer. Once she recovered, she was repatriated and greeted by General Schwarzkopf, who she grinned at and apologized for not being able to move her arms, explaining that she would "normally" salute four-star generals.

After the capture, Major Cornum was interviewed with Sergeant Dunlap about their experience. This single interview revealed a great deal about attitudes that abounded towards women in the military held by servicemen, the military hierarchy and also members of the Commission. She repeatedly insisted she had simply done her job and was, therefore, not at all extraordinary in her conduct during and after capture. Dunlap was asked if based on his experiences with Cornum, he thought women should be in combat. He replied, "I don't think they should be there." When he was later asked if he would go to war again with Cornum specifically, he replied without hesitation, "Of course, I would go anywhere with Major Cornum."[53]

Dunlap's inability to link his positive experiences with a woman who excelled at her job as a soldier in strenuous combat conditions with the potential for other women to be able to do the same is mirrored in the Commission's dismissal of the strong body of evidence they had before them, compiled of instance after instance of military women's real-life experiences on the job. Dunlap had undeniable proof in his personal experience with Major Cornum of the ability of women to perform in combat situations. His final assessment, however, differed from his opinion, likely instilled by a hierarchy that still held on to archaic beliefs about a woman's place, despite conclusive evidence that women, as a group, simply should not be in combat situations. The argument's basis, as with many of the Commissions arguments, aimed at continuing the exclusion into combat related trades was largely emotional, rather than one being based in reason.

Given the prioritizations of testimonies and the methodology employed by the Commission, the subsequent recommendations to the issue of gender integration into combat roles were not surprising. What resulted from the Commission's reports was the decision to uphold the status quo and to exclude women from combat and combat support trades. The only exception was to open combat vessels positions to women—not surprising given the Navy's comparatively positive tendency to be at the forefront of integration. The previously passed amendment in Congress regarding women on combat aircraft however, was repealed to restore the original gender restrictions. This was extremely surprising, given that the conditions that had led to the original amendment already contained irrefutable proof of women's abilities and suitability.

Combat Camera AR2006-H031-0008a

Corporal Venessa Larter and members of the Canadian Forces are conducting a presence patrol in the village of Spin Kalacheh

Commissioner Mary Clarke (Retired Major General) wrote tersely in her final statement that a number of the Commissioners had preset agendas to prevent gender integration, regardless of the blitz of evidence they received in its favour.[54] The experiences of women who had been in combat were marginalized in favour of those who spoke in favour of the viewpoints of the conservative majority. For example, Commissioner Samuel Cockerham, a retired Brigadier General, was one of the most ardent opponents of integration. His input often drew on his own opinion and was peppered with speculative and negative rhetoric. Similarly, a section of the report stated that, "the case against women is compelling and conclusive."[55] Yet the "evidence" he goes on to cite for this statement is based on his opinion, speculation and assumption rather than any empirical facts.[56] Opinion-based opposition to integration is hardly compelling or conclusive evidence. At its best, it is benign, ignorant and the source of some considerable friction. At its worst, it has led to acute issues in a military organization that has all but practically, if not officially, become integrated as a result of operational realities.

Yet, from those times until now, little has changed in the spectrum of official military policy. Lindsay Rousseau Burnett remarked of her experiences in a recent *New York Times* interview, "As horrible as this war has been, I fully believe it has given women so many opportunities in the military."[57] She was one of the first women to serve as a communications specialist with a brigade combat team in Iraq, something that even a decade ago would not have been permissible. The circumstances inherent to counter-insurgency warfare (both cultural aspects and an asymmetric engagement field) have forced the hand of military commanders to once again "quietly sidestep regulations that bar women from jobs in ground combat."[58] Women are often now "attached" (not assigned) to special forces elements and combat arms units as intelligence operators or military police, facing the same dangers as the combat designated soldiers in their adopted units.

In reality, soldiers not directly affiliated with combat units are now similarly subject to many of the same risks found by combat units. The combat risk-rule, which "could very loosely" apply in a symmetric conventional environment, now seems completely schizophrenic in the context of a counter-insurgency. The incident that brought this point home was the attack on 507th Maintenance Coy on 23rd March 2003 in Nasiriyah. The 507th was a missile repair unit supporting the 52nd Air Defence Regiment—under the traditional risk-rule, it was not expected to engage in ground combat. This mattered not to the adversary, who executed an attack and killed 11 soldiers. This was just one incident of hundreds, which demonstrated that attempting to limit female soldiers' liability in operations was increasingly a senseless endeavour. There have been over 600 American women wounded, with nearly 70 killed in combat. At worst, attempting to force this artificial distinction creates two tiers of soldiers. This has created a myriad of issues for military women, from experiencing difficulties getting credit for their exemplary performance under fire to lacking support and clinical infrastructure to accommodate them after their tours (since they were not supposed to have been in combat in the first place).

The day-to-day operational conditions faced by women of both the Canadian and American militaries are virtually identical. Compare for instance Lieutenant-Colonel Jennie Carrigan, the first Canadian female officer commanding an engineer regiment in Kandahar, and Major Kellie McCoy, the first American female engineer company commander in the 82nd Airborne Division. While LCol Carrigan carries the full entitlement and authority of her position, Maj McCoy is technically bending the rules—as an officer, she is allowed to lead troops on operation in Iraq, but as a woman, she is, strictly speaking, prevented from serving among them.[59] Confusing? Absolutely. Both soldiers perform comparable tasks, yet one is saddled with policies that hamper full recognition of her unlimited liability (in practical if not precise terms) and create a disjoint between herself and the soldiers she commands. For Canada and the United States, two countries that have been relatively consistent in keeping up with each other's gender integration initiatives, contemporary Southwest Asia is an odd time and place to find such a persistent divergence in attitudes and policies.

Was it the case that Canada's generally more "permissive" outlook on gender equality allowed for more expedient total gender integration in the military? Maybe … or maybe not. But directly, it was a product of the political culture, which had the will and means to push for it. Clearly, such a process was not appropriate for the United States. However, the concerns surrounding integration into combat and

combat-related trades were virtually the same across the borders. Apprehensions about ability, cohesion, propriety and sexuality abounded, and countries set out to unsuccessfully prove the negative effects rather than disprove them. Arguments against were the same tired emotion-, perception- and norm-based arguments that typically accompanied every major push for military gender integration and were empirically disproved after each advancement. The Canadian government saw no catastrophic reason to prevent integration and proceeded to push it through. The "burden of proof" for American female soldiers, concluded by the Presidential Commission to not have been met by the early 1990s, has now been undeniably blown out of the water with their operational performance in the last decade. However, as long as women are still denied full opportunity, recognition and status, unnecessary problems will continue to arise.

The final objective for professional militaries should be to employ the best possible person for the job. It is inconceivable that the opinions of someone like Commissioner Cokerman continue to so heavily influence policy in light of the empirical evidence to the contrary. His official closing statement in support of his assertion that combat exclusion for women should remain, concluded with the sentence, "War has changed, but combat has not. Combat was, is now, and always will be hell!" Unfortunately this statement never spoke to the real issue, namely that women can, and have always been, capable of combat related employments. Amidst the prejudice, agendas and politics, efforts at gender integration in both Canada and the United States have merely been the slow and often times reluctant acknowledgement of that fact."

Combat Camera AB2009-057-04

Master Corporals (MCpls) Melanie Morissette (L) and Natalie Finnigan, both from the 2nd Service Battalion in Petawawa, keep and eye on their cargo load as the CH 146 Griffon helicopter prepares to lift it off the ground

ABOUT THE AUTHOR...

Second Lieutenant Marta Rzechowka was first drawn to military matters after being regaled with stories as a young girl from her grandmother about Poland's Home Army (which made extensive use of women soldiers) during the Second World War. The inspiration for this article came about as a series of humorous yet poignant experiences during her tou r to Kandahar in 2006.

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16. According to the Army definition, direct combat is "engaging an enemy with individual or crew-served weapons while being exposed to direct enemy fire, a high probability of direct physical contact with the enemy's personnel and a substantial risk of capture. Direct combat takes place while closing with the enemy by fire, manoeuvre or shock effect in order to destroy or capture, or while repelling assault by fire, close combat or counterattack." The Army uses a Direct Combat Probability Coding System (DCPC), established in 1983, to classify every position based upon the likelihood of engaging in direct combat. (Source: Department of Defense, official website: http://www.defenselink.mil).
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Source: Combat Camera

Source: Combat Camera

NIGHTDRIVER THERMAL IMAGING: FILLING A CAPABILITY GAP

Captain B. Lafave

INTRODUCTION

For several years, thermal imaging (TI) devices have improved the ability of militaries and law enforcement agencies to manoeuvre and operate in dark conditions. TI technology has been incorporated into soldier-worn head mounts, weapons sights, security cameras and vehicle driver's aids. While TI has been incorporated into current Canadian vehicles (such as the LAV III), the majority of the Canadian Army's fleet remains unequipped with any night vision capability.

Canadian foreign operations involve blackout driving and movement through both rural and city areas that can have little to no lighting. While a portion of the vehicles operating in these conditions have TI, the capability gap is the lack of this technology within the support fleet of the Canadian Forces (CF).

The NightDriver System features far infrared technology whose capabilities would improve the driving awareness of the soldiers while its characteristics would enable easy integration into military equipment. Its costs are comparable to night vision goggles. Furthermore, its EMC compliance and its ability to operate in adverse conditions allow for usage in domestic and foreign operations.

With the proper testing and evaluation, followed by operational trials and correct training, the NightDriver System has the potential to fill a capability gap in the Canadian Army's vehicle fleet.

THE GAP

The lack of TI inhibits many CF drivers and limits their ability to operate effectively at night. Indeed, civilian studies have shown that although only 25% of total driving time for the average vehicle is during the night, the odds of dying in a car crash are five times greater. Furthermore, 55% of all driving fatalities occur after dark as well as 62% of pedestrian fatalities. Many militaries have recognized these facts and have either equipped drivers with night vision goggles or have integrated night vision capabilities into vehicles. However, these two options do not have the same effect.

The CF's current night vision goggles are image intensifiers (I2) which amplify the available visible light. They are affected by smoke, dust and blooming from light sources, all of which diminish the effectiveness of these goggles. Furthermore, wearing night vision goggles for driving purposes is not desirable. They are heavy, causing stress to the neck over long periods, and their single lens intake removes all depth perception, decreasing driver performance.

The Canadian military made the decision to use TI technology, which is not affected by smoke, dust or blooming, and integrated it into the LAV III as a driver's aid monitor. The chief advantage of the system is that it does not require the driver to wear any extra equipment, and it enables their use of what depth perception they have. The system is operable during daylight hours providing additional visual information that further improves the driver's capability.

Canadian foreign operations frequently involve blackout driving and movement through both rural and city areas that can have little to no lighting. While a percentage of the vehicles operating in these conditions have TI, all support, resupply, heavy equipment and light vehicles do not have this technology and are still relying on I2 night vision goggles to operate. To address this capability gap, a lightweight, easily installed TI system could improve the mobility capability of the Canadian fleet. The NightDriver System is one possible solution to this gap.

BACKGROUND

Raytheon has developed the first civilian automotive thermal imaging driver's aid, called the NightDriver System. It features far infrared technology that is projected onto a heads-up display (HUD), and its capabilities could improve the soldiers' driving awareness, while its characteristics could enable easy integration into military equipment.

The system is comprised of a single camera and HUD. The HUD, shown in Figure 1, weighs 0.9 kg and attaches to the dashboard of the vehicle. It takes 23 x 18 cm of space with a height of 11 cm when opened and 3 cm when closed. The ability to close the HUD makes it more compact than a closed laptop computer. The camera, shown in Figure 2, can be attached to many locations on the front of the vehicle and weighs only 0.9 kg.

Image provided by author

Figure 1: NightDriver HUD

Image provided by author

Figure 2: NightDriver Camera

The lightweight characteristics and simplistic mounting would enable this system to be easily employed in a variety of vehicles, unlike the current LAV III TI, which is heavily integrated and has specific mountings.

The NightDriver System is powered by volt direct current (VDC), which is variable between 9.5 and 16 volts. This allows for easy integration into most common vehicles that operate with 12 V DC, while having variability for future vehicle systems.

OPTICS

The optics on the NightDriver Camera has a focal distance from 8 m to infinity, using a fixed focus method. Objects closer than 8 m will not be as clear, and the closer an object is to the camera, the more blurred the image will be. This setting is not variable, and therefore, bringing the focus point closer to the vehicle is not possible.

The field of view (FOV) of the camera and HUD dictates what area is viewable by the camera and at what angles the HUD screen can be seen. The FOV of the camera is 12° x 9°, and for the HUD, it is 10° x 4°. It is important to note that the horizontal 12° FOV angle for the camera will allow the entire width of a 6 m wide road to be seen at a distance of approximately 28 m and at the 8 m focus distance, a width of approximately 2 m can be seen. These FOV characteristics will determine the placement of the HUD and camera to allow easy viewing and the capability to provide the required viewing of roads.

THERMAL IMAGING

The thermal imaging technology in the NightDriver System attempts to balance between having state-of-the-art equipment, while keeping size and cost low enough to compete on the civilian market. The system operates in the 7–14 micrometer wavelength range, using a focal plane array system with uncooled ferroelectric detectors.

Focal plane arrays (FPA) are systems of two-dimensional arrays of infrared detectors used to create an image. The detectors for the NightDriver are made up of 160 x 120 ferroelectric pixels. There are different options for the detector material, but ferroelectric detector technology takes advantage of a ferroelectric phase transition in certain dielectric materials. At and near this phase transition, the electric polarization of the dielectric is strongly affected by temperature. Therefore, small changes in temperature of the material cause large changes in polarization, which can then be used to produce the thermal image.

Ferroelectric technology is being used in many civilian and military thermal imaging systems due to its low manufacturing cost and the fact that it can operate without cooling, which decreases the size of the overall system and increases its operating life. This detector scheme provides forward-looking infrared technology for many applications where cost, weight, power, reliability and size are important design considerations.

Usage characteristics of the thermal imaging system have also been examined. The system takes 45 seconds to start and uses visual processors that have enabled its range of detection for personnel to reach 1,500 ft (457 m). Its video output is white-hot and black-cold with a refresh rate of 30 Hz. This refresh rate of 30 images per second makes for a smooth-flowing, real-time video. Also, the video output is compatible with the National Television Systems Committee (NTSC) system, which makes NightDriver compatible with video equipment from Canada, South Korea, the Philippines, the United States and other countries.

CONSIDERATIONS

There are many considerations when a piece of equipment is to be used in varying environments. For electrical systems, they must have electromagnetic compatibility (EMC) compliance, since any piece of electrical equipment will produce electromagnetic waves, whether designed to do so or not. NightDriver falls under Part 15 of the Federal Communications Commission, which means that the equipment is a low power, unlicensed device that could cause interference to the Amateur Radio Service (HAM Radios) because it generates RF energy that is intentional, unintentional or incidental. This classification must be considered in the integration of the NightDriver System into any vehicle to ensure there is no damaging or unwanted interference.

The NightDriver System is operable in a wide temperature range from -40 to 75°C, which would enable its use in most domestic situations, as well as most conditions abroad. The system is also water resistant,

but it is not submersible and would most likely require some form of ruggedization to ensure it could handle impacts and possible water submersion. However, an examination would have to be performed to determine which would be more cost effective: replacement of the broken component or the cost per unit of ruggedization. A summary of the NightDriver System's characteristics that have been discussed is shown in Figure 3.

	NIGHTDRIVER SPECIFICATIONS	
Focal Plane Array	Type & Material	Uncooled Ferroelectric
	Pixel Count	160x120
	Spectral Response	7-14 um
Thermal Imaging Performance	Start-up Time	~45 seconds
	Contrast/Brightness	Automatic, with advanced image processing features
	Range to Detect a Person	Up to 1500 ft (457m)
Optics	Focus Distance	~28 ft (8m) to infinity
	Focus Method	Fixed
	Field of View	Camera (12°x9°) Head-up Display HUD (10°X4°)
Video	Output Format	NTSC Compatible
	IR Polarity	White Hot–Black Cold
Power	Input Voltage	9.5 to 16 VDC
Physical Characteristics	Size	Camera 6.6"W x 6"H x 4.25"D (17 x 15 x 11cm) HUD (opened) 8.9"W x 4.5"H x 7.0"D (23 x 11 x 18cm) HUD (closed) 8.9"W x 1.25"H x 7.0"D (23 x 3 x 18cm)
	Weight	Camera 2 lbs. (0.9kg) HUD 2 lbs. (0.9kg)
	Mounting Provisions	Vehicle mount
Environmental	System Operating Temp	-40°C to 75°C
	Camera Water Resistance	Carwash qualified (not submersible)
	EMC Compliance	FCC Part 15

Figure 3: NightDriver Specifications

INTEGRATION AND OPERATIONAL ISSUES

The NightDriver System has many advantages and has potential to fill the capability gap for night driving aids for much of the Canadian Army's fleet. The NightDriver System's characteristics must be examined for issues with respect to integration into both the fleet itself and the operations those vehicles would take part in.

The main advantage of the the NightDriver System is that it is lightweight and compact; characteristics that are desirable given that the vehicles that would install this system, such as LUVWs, HLVWs and heavy equipment, have little room in their driver compartments for large, bulky systems. The ease of mounting and variable voltage also enable easy integration into all of the support vehicles.

The FOV of the camera does not enable a wide angle of visibility at closer ranges, which would not be effective in seeing personnel approaching from the sides, just in front of the vehicle. However, the detection of personnel in this blind spot would be difficult with normal headlights and would require the use of the driver's peripheral vision or other night vision devices. Also, there is a 360-degree version of the NightDriver System, which can allow the camera to be rotated under the control of the driver. This would enable regular driving conditions as well as the ability to verify objects/obstacles in specific directions.

The focus distance of 8 m is not variable and would cause images closer than that distance to become less clear as they neared the vehicle. However, if the driver is aware of an obstacle in advance, far beyond 8 m, the driver could reduce speed and use visible light identification of the obstacle within the 8 m distance. Furthermore, the driver would still be aided by the NightDriver within 8 m, but the image would not be as clear.

It is assumed that since the CF have purchased and continued to develop thermal imaging for night observation and driving that the NightDriver System is a viable solution to the capability gap.

The TI technology incorporated into the NightDriver System has high-resolution, a sufficient refresh rate to keep the image current, and the use of ferroelectric technology to ensure that it has the sensitivity required to detect and display all details of the road ahead. TI technology is not affected by smoke, dust or blooming of light, as shown in Figure 4. Also, TI is equally effective in little to no light, shown in Figure 5, unlike image intensifiers, which require available visible light.

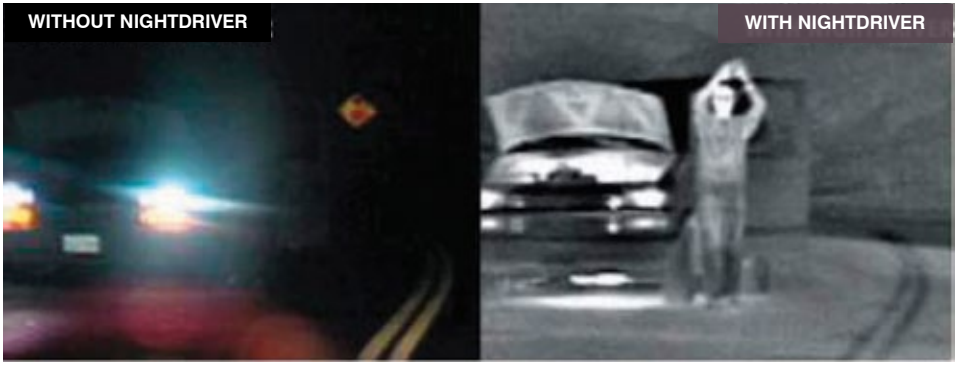

Figure 4: NightDriver Unaffected by Headlight Blooming

Figure 5: NightDriver Operating in Low Light

The TI's other characteristics, such as quick start-up time, electrical and visual compatibility and a 1,500 ft range enable it to be effective for military operations and easily integrated into current equipment. The EMC compliance would have to be confirmed when mounted on each type of support vehicle, and verification would have to be performed to ensure that no existing and installed systems are affected.

The cost of bringing a new system into the entire support fleet would not be small. The system costs $3,295 each, but shipping, installation, ruggedization and maintenance costs could increase this. However, the less effective driver's aid option of NVGs can be comparable in expense, ranging from $500 to $3500, depending on quality. With respect to costs, the NightDriver System is a comparable option and, with its greater effectiveness, should be considered as cost effective.

TRAINING

The US Army performed a study on the use of night vision devices (NVD) for driving assistance. It found that 57% of accidents when using NVDs involved drop-offs. Additionally, the inability to detect a hazard or obstacle was a causal factor in 43% of the accidents. Also, nearly 63% of the accidents involving drop-offs were due to detection errors; the drivers either did not see the hazard or detected it immediately prior to driving over it.

A drop-off detection test was developed where drivers would follow a course and come upon known drop-off locations. They would then have to drive forward until they were able to identify the drop-off. Unfortunately, the drop-off locations were known to the drivers, and they used this information to avoid actual accidents during testing. However, further tests are being developed to attempt to mitigate this safety factor.

During the testing, the drivers were asked to wear eye-tracking devices in order to help analyse which portion of the thermal imaging display was used most. In regular night driving, the drivers devoted most of their attention to the closer terrain, just in front of the vehicle. The eye-tracker results for this can be seen in Figure 6. However, when the soldiers knew of upcoming obstacles or drop-offs, the driver's attention was focused on farther terrain (Figure 7), and this method reduced accidents and increased the number of obstacles avoided.

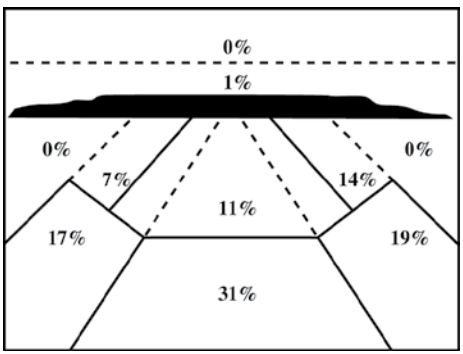

Figure 6: Routine Eye Tracking Results

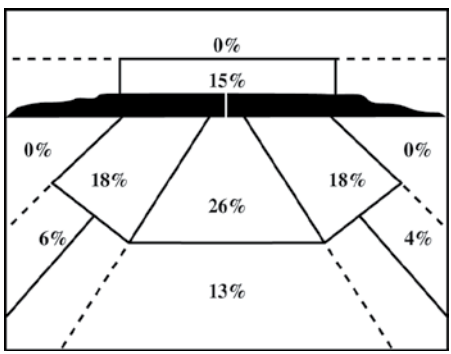

Figure 7: Eye Tracking Results when Drop-offs Were Known

While this study was obstacle specific and was constrained by the safety precautions of the soldier's knowledge of drop-off locations, it had positive learning value. It concluded that if soldiers were trained to focus on proper areas of the NVD screen, that more vehicles accidents could be avoided. Furthermore, it shows that equipment must be understood and used properly to achieve its highest effectiveness. This lesson could be applied in the use of night driver's aids within the Canadian Army's fleet. Other training, including installation, maintenance and proper functioning of the system, would also be involved in integrating a night driving aid such as the NightDriver System.

CONCLUSION

Canadian foreign operations involve blackout driving and movement through both rural and city areas that can have little to no lighting. While a portion of the vehicles operating in these conditions have TI, the capability gap is the lack of this technology within the support fleet of the Canadian Forces.

The NightDriver System features far infrared technology whose capabilities would improve the driving awareness of the soldiers while its characteristics would enable easy integration into military equipment. Its costs are comparable to night vision goggles. Furthermore, its EMC compliance and its ability to operate in adverse conditions allow for usage in domestic and foreign operations.

With the proper testing and evaluation, followed by operational trials and correct training, the NightDriver System has the potential to fill a capability gap in the Canadian Army's vehicle fleet and should be further investigated for this purpose.

ABOUT THE AUTHOR...

At the time of writing Captain Benjamin Lafave was a student in the Applied Military Science department at RMC.

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Source: Combat Camera

"OUR STEEL COMRADES" CANADIANS, AUSTRALIANS AND TANKS AT THE BATTLE OF AMIENS

A. McEwen

"Our tanks . . . were of very little assistance."[1]

—After-action report on 8 August 1918 attack, 13th Battalion, Canadian Expeditionary Force (CEF)

"The work of the tanks was magnificent right through."[2]

—Second Lieutenant A.M. Williams, 57th Battalion, Australian Imperial Force (AIF)

INTRODUCTION

The sharp contrast between these two observations illustrates one of the enduring controversies surrounding the Battle of Amiens, 8–18 August 1918. The 420 combat tanks deployed at Amiens experienced varying levels of success.[3] The Canadian report illustrates that some infantry units were disappointed by the poor performance of combat tanks during certain phases of the battle. The Australian report, on the other hand, conveys that other battalions found tanks indispensable for victory at Amiens.

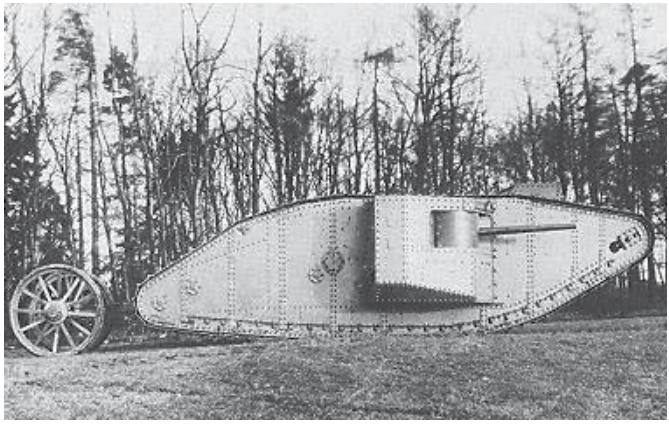

Image provided by author

Figure 1: Mk I tank nick named Mother, was a fundamental step forward in the evolution of the tank and the same basic shape was used in most subsequent tank designs

The wartime disagreement over the tank's contribution to the success at Amiens endures in scholarly commentary and debate. Historians such as J.F.C Fuller and Tim Travers argue that tanks were the pivotal component of the Allied victory at Amiens.[4] Fuller contends that without tanks the immense surprise and success of the operation would have been almost impossible to achieve.[5] The Australian official history similarly argues that tanks were indeed one of the principal factors in ensuring victory at Amiens.[6] Conversely, other historians such as Daniel Dancocks and Tim Cook favoured the judgment of tanks represented in the Canadian report, with Dancocks stating that they were "too primitive to be decisive" at Amiens.[7] The Canadian official history concurs with Cook and Dancocks and notes that success at Amiens was not due to a "massed tank attack."[8]

These *post-facto* generalizations are typically very selective in their evidence and do not present a comprehensive analysis of tank warfare at Amiens. A far more balanced perspective on tanks is provided in Peter Hart's *1918: A Very British Victory*. Commenting on the massed tank attack at Cambrai in November 1917, Hart argues that the "tank was not a war-winning weapon on its own—it was part of the greater whole."[9] Hart contends that battles with tanks, aircraft, artillery and infantry are better understood as "All Arms Battles," where each of the arms contributes to success. He states that the

tank "had clear weaknesses as well as strengths," but its "value lay in what it brought to the All Arms equation."[10] In contrast to Fuller and Dancocks' disagreement, Hart's balanced assessment conveys that tanks were not sole guarantor of success, but were nevertheless an important component in the 8 August attack.

The purpose of this paper is to re-evaluate how Canadian and Australian infantry interacted with tanks at Amiens. The historiographical discrepancy over the tank's performance is too focused on a "black-and-white" conclusion and neglects the nuanced character of tank warfare. A re-evaluation of how the infantry reported success with tanks is necessary to reach a less extreme evaluation on how tanks functioned at Amiens. The source material for this paper will therefore rest primarily upon infantry battalion war diaries. War diaries are essential for a reconstruction of the Battle of Amiens from a ground-level perspective. They are especially important in understanding how individual battalions experienced the battle alongside tanks. When combined with other battalion accounts in different brigades, divisions and even corps, it is possible to assemble a comprehensive portrait of infantry-tank interaction. A heavy exposition of infantry war diaries, however, entails some risks. An inherent pro-infantry bias pervades these diaries and reports, and success or failure of an attack could be unfairly ascribed to the performance of tanks. For example, units such as the 75th Battalion CEF that sustained heavy casualties on 8 August were bitter towards tanks in light of the battalion's harrowing experiences.[11] Nevertheless, the purpose of this paper is to examine the performance of tanks from the infantry's perspective because the tanks' overall duty was to support the attacking infantry. A utilization of infantry reports thus presents an essential, if somewhat one-sided, means of analysing tank performance at Amiens.

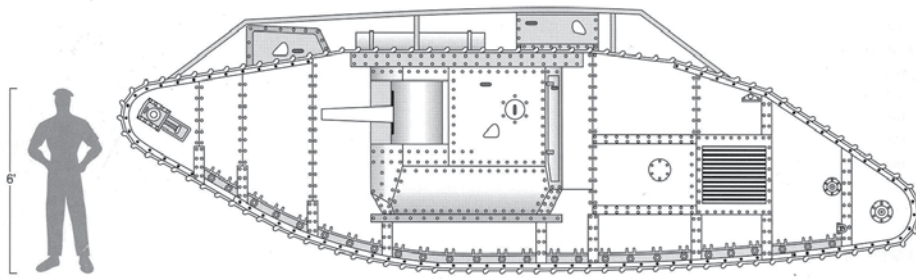

Image provided by author

Figure 2: line drawing of the Mk V tank

The Canadian and Australian Corps were chosen by General Sir Henry Rawlinson, the General Officer Commanding (GOC) of the Fourth Army, to form the spearhead of the attack at Amiens. They were allocated the bulk of the combat tanks assigned to the offensive and are therefore ideal formations to compare and contrast when evaluating the tank's performance in the battle. This study finds that the difference stated in the official histories between the Canadian and Australian experiences of the battle is not borne out by the evidence presented in infantry war diaries. A detailed analysis along both sides of the corps boundary reveals several tendencies in the tanks' performance that influenced their contribution to the battle's overall success. For example, some of the tanks got lost in a dense fog shortly after zero hour on 8 August, and so were a disappointment to their accompanying infantry. Similarly, when confronted with open flanks at Le Quesnel and Chipilly, the tanks suffered dreadful losses and forced the infantry to attack without them. However with secured flanks, the tanks were able to lend critical support to pinned-down infantry and help them attain an objective. Similarly, supply tanks kept the front line of the advance stocked with critical provisions to help the infantry consolidate their gains and defend against counterattacks. The mixed performance of tanks throughout the battle thus illustrates that Fuller's wholly positive view of tanks and Dancocks' dismissive view of tanks do not represent how Dominion infantry experienced armoured warfare at Amiens. Ultimately, a careful reading of both Australian and Canadian war diaries demonstrates that tanks were a variable contributor to victory in the Battle of Amiens.

STRATEGIC CONTEXT

The awful bloodletting in the attritional campaigns of 1916 and 1917 failed to shorten the war. Both the Central Powers and the Allies were nearly exhausted by the millions of casualties sustained on the Western Front. The end of the war appeared years away. Indeed, the British War Office felt there was little chance of achieving a breakthrough on the Western Front until mid-1919 at the earliest.[12] The growing strength of the American Expeditionary Force, combined with the capitulation of Imperial Russia in late 1917, presented a brief timeframe in early 1918 for the Germans to seize the initiative. Beginning on 21 March 1918, the de facto commander of the Imperial German Army, Quartermaster-General Erich Ludendorff, launched a series of offensives on the Western Front to force the Allies to a negotiated settlement. These "Spring Offensives" ultimately failed to breach the Allied line and cost the German Army a million casualties from March to July 1918.[13]

Generalissimo Ferdinand Foch, the Commander-in-Chief of the Allied armies on the Western Front, therefore planned a series of counteroffensives to gradually drive back the German tide from its high-water mark 80 kilometres from Paris.[14] His first blow with French and American forces supported by tanks at Soissons on 18 July 1918 regained the initiative for the Allies.[15] His next envisaged offensive was to be directed in Picardy to protect the vital Amiens-Paris railway against a German salient that bulged to the southeast of Amiens. The attack was originally scheduled to commence on 10 August, but was later moved up to the 8th.[16]

The British Fourth and French First Armies were tasked by Foch with the limited offensive at Amiens on 8 August. These two formations were placed under the operational command of Field Marshal Sir Douglas Haig, the GOC of the British Expeditionary Force (BEF).[17] The Fourth Army, comprised of the Australian Corps under Lieutenant General Sir John Monash and the British III Corps under Lieutenant General Sir Richard Butler, held the Amiens front since March and was weakened in the fighting to stem the Spring Offensives.[18] Haig therefore detached Lieutenant General Sir Arthur Currie's Canadian Corps to augment Rawlinson's forces. The Canadians were particularly valuable for a surprise offensive at Amiens because of their growing reputation as highly effective "shock troops."[19] They were also the freshest BEF corps on the Western Front due to Currie's reluctance to commit his command piecemeal to stem the Spring Offensives.[20] Haig wanted the offensive at Amiens to be a decisive breakthrough on the Western Front,[21] but eventually consented to Rawlinson's original plan of a limited 20-kilometre advance.

DOMINION ATTITUDES TOWARD TANK WARFARE

An analysis of the Canadian and Australian experiences with tanks at Amiens benefits from a brief discussion of their contrasting philosophies on armoured warfare prior to 8 August 1918. The Canadians were largely sceptical of the tank's capabilities, and their prior experiences with armoured warfare convinced them that tanks were unlikely to be a decisive element on the battlefield. The Australians, however, rapidly developed an appreciation for tanks after the Battle of Hamel in July 1918, and by August, they were eager advocates of armoured warfare.

CANADIANS

The Canadian Corps was one of the first units in the BEF to experience tank warfare, and its appraisal of the tank's capabilities was never very positive. The tanks' baptism of fire came on 15 September 1916 during the Battle of Flers-Courcelette. Six of the original Mark I tanks were assigned to the 2nd Canadian Division for its assault on the Sugar Factory at Courcelette.[22] Due to mechanical unreliability and German fire, the tanks were quickly put out of action before they could influence the battle.[23] Their performance was so mediocre that the Canadian Corps GOC in 1916, Lieutenant General Sir Julian Byng, remarked that tanks were "a useful accessory to the infantry, but nothing more."[24] Subsequent battles did little to endear the Canadians to tanks any further. The eight tanks allocated to the 2nd Canadian Division for its assault on Vimy Ridge on 9 April 1917 were considered by Private Donald Fraser to be "a complete fizzle" over the heavily cratered and muddy ground.[25]

Despite such a disparaging attitude, Canadians trained with tanks in open warfare exercises over the summer of 1918 in anticipation for Foch's counteroffensives. In early July the officers and men of the 19th Battalion CEF were ordered to observe a demonstration of tanks near their billets "so that they will be familiar with the workings of tanks."[26] The 6th Canadian Infantry Brigade (CIB) engaged in a similar exercise on 3 August and wrote after Amiens that the period of tank training "proved to be of the greatest value."[27] Corps staff officers thus ensured that Canadian soldiers would be well acquainted with armoured warfare for the Amiens offensive regardless of their troops' hesitant attitude towards tanks.

AUSTRALIANS

The Australians, on the other hand, were far greater advocates of tank warfare. Their introduction to armoured warfare at the Battle of Bullecourt on 11 April 1917 was as inauspicious as the Canadian experience at Courcelette. The wire-crushing capabilities of tanks were depended upon to compensate for the critical shortage of artillery for the attack on Bullecourt. The tanks ultimately failed to cut the wire, and the assaulting 4th Australian Division was slaughtered.[28] Nevertheless, Monash noted in his memoirs that he decided to include tanks alongside the 4th Division in a limited offensive at Hamel on 4 July 1918 to "restore to the Australian his lost confidence" in tanks.[29] The attack was a stunning success, and the combination of 60 tanks on a limited frontage, the element of surprise, heavy mist and an unsuspecting German garrison enabled the Australians to quickly secure their objectives with minimal casualties.[30] The Australians' dismal opinion of tanks was instantly reversed, and according to a tank corps narrative, the 4th Australian Division "requested that tanks continue to support them in subsequent operations."[31]

This newfound enthusiasm for tank warfare was incorporated into Rawlinson's plan for a limited offensive near Amiens. By August 1918, the Australians were intimately familiar with the ground they were expected to traverse, having held the Amiens front near Villers-Brettoneux since late March.[32] This long service in front of Amiens allowed them to train rigorously with other arms for the forthcoming offensive. A report of the 17th Battalion AIF noted that on 5 August the officers and men socialized with the tank crews who would be accompanying them on the 8th.[33] This prebattle introduction between tankers and infantry was crucial both to morale and to prepare for the imminent battle. Indeed, Captain W.H.L. McDonald of the 57th Battalion AIF wrote exuberantly in early August that "I am sure that the success of subsequent operations undertaken by this unit, in conjunction with tanks, is assured."[34] Captain McDonald's predictions were indeed borne out by his battalion's experiences on 8 August.

TANK DESIGNS AND INTENTIONS

The tanks at Amiens were a considerable improvement over their 1916 ancestors. Though their outward appearance changed little, the new Mark Vs were faster and more mechanically reliable than their antecedents at Flers-Courcelette.[35] The principal British combat tank at Amiens was the Mark V heavy tank. The "male" variant was equipped with two six-pounder artillery pieces and four machine-guns to destroy German fixed defences. The "female" variant was fitted with six machine-guns for anti-personnel use.[36] These tanks were primarily detailed to support the infantry by delivering "local fire protection" against stout German machine-gun posts and by cutting thick belts of barbed wire that were left intact by the preliminary bombardment.[37] The close-range, six-pounder fire and wire-crushing caterpillar treads would theoretically provide the infantry with a surrogate for artillery support when it was either temporarily unavailable or out of range.

Tanks were not wholly depended upon to replace artillery, however. The debacle at Bullecourt and the medium calibre of the six-pounder gun meant they were not adequate replacements for the artillery barrages that were still the infantry's primary means of support. Furthermore, these tanks could only move approximately two kilometres per hour over ground scarred by trenches, or five kilometres per hour over flat ground. The infantry were, therefore, instructed to maintain close contact with them to exploit any gaps through the German defences.[38] These tanks were limited by an operating range of

approximately 13–16 kilometres before they became too worn out to continue. Similarly, the crews could function in their hot and fumy machines for only 8–12 hours before needing a lengthy rest.[39] The British also introduced a new type of tank at Amiens, the Medium Mark A or "Whippet" tank. The lighter Whippets could travel 13 kilometres per hour over ideal ground and were intended to exploit the gap in the line broken by the infantry and the heavier Mark Vs.[40]

In addition to these combat tanks, several other designs were employed to haul supplies and men forward to the advancing infantry. Maintaining the tempo of an offensive and keeping front line troops well supplied was a persistent problem on the Western Front. The hail of bullets and shrapnel over No Man's Land meant that resupply parties often had to run a gauntlet of fire simply to keep advance troops stocked with ammunition.[41] Indeed, historian Geoffrey Hayes argued that at Vimy Ridge there were two battles to fight: one to capture the ridge and the other to consolidate it against German counterattacks.[42] Entire infantry companies were thus formed to carry material forward using straps affixed to the forehead known as "tumplines," with which a single soldier could haul approximately 100 pounds of ammunition, grenades or rations over a few hundred metres.[43] At Vimy, the furthest distance advanced by the 3rd Canadian Division was 1600 metres.[44]

In preparation for the 20-kilometre advance at Amiens, several obsolete Mark IV tanks and gun carriers (early versions of self-propelled artillery) were converted to supply-carrying vehicles to free up infantry otherwise needed for fetch-and-carry.[45] The supply tank theory was first tested with four Mark IVs at Hamel;[46] they carried an average of 10,000 pounds of supplies forward to support the infantry. An example from Amiens illustrates the capabilities of these supply tanks. Over the course of 8 August Tank No. 137 of the 1st Gun Carrier Company carried 9,050 pounds of provisions. This single tank transported supplies that would otherwise have taken 90 men with tumplines to haul. Its total loadout was: 20 boxes of small arms ammunition, 200 Stokes bombs, 4 Stokes mortars, 100 water tins, 200 shovels, 100 picks, 400 panniers of Lewis Gun ammunition, 42 boxes of Mills bombs and 33 trench mortar rounds. It travelled approximately 26 kilometres over the course of the day in support of Australian infantry.[47] Table 1 details the loads carried by 1st Gun Carrier Company, Tank Corps for the Australian Corps on 8th August, 1918.

Stores	Tank No.					
	119	137	101	109	146	140
Small arms ammunition, boxes	20	20	14	14	4	20
Sandbags, bales						2
Stokes, 3" bombs	300	200	30	30		150
Wire, barbed, coils						60
Water, tins	75	100	50	50	50	50
Grenades, No. 36, boxes		42			2	63
Grenades, No. 6, boxes	42					
Flares, ground	2					
Grenades, smoke, boxes	12					
Pickets, long	30					120
Pickets, short						240
Stretchers						
Stokes 3" guns		4				
Shovels		200				
Picks		100				
Panniers, Lewis gun	384	400				

Stores	Tank No.					
	119	137	101	109	146	140
Trench mortar ammunition, boxes		33	33	33	21	
Machine-gun ammunition, boxes			26	26	6	
Rations, iron, boxes			2	2	2	
Biscuits, boxes			2	2	2	
Royal Engineer Stores			About 3 tons	About 3 tons	About 3 tons	
Newton mortar					1	
Charges					30	
Approx: weight (lbs)	6,910	9,050	13,396	12,496	9,681	6,280
Distance trekked (yds)	10,550	29,040	24,600	26,360	24,600	26,360

Table 1: 1st Gun Carrier Company, Tank Corps—Details of Loads Carried for the Australian Corps, 8th August, 1918[48]

There was roughly one company of six such supply tanks allocated to each division. The six supply Mark IVs assigned to the 2nd Canadian Division were divided equally amongst the 5th CIB assaulting the Red Line, 9.5 kilometres from the start line and the 6th CIB assaulting the Blue Dotted Line, 13 kilometres from the start line.[49] These defensive lines were furthest away from the jump-off positions on 8 August, and so would face the greatest danger of German counterattacks. The great distances also necessitated a means of mechanical, rather than human, transport to haul the supplies forward. Indeed, the enormous volume of entrenching tools, ammunition and wire were considered vital for consolidating each of the successive lines into a comprehensive network of defences against counterattacks.[50]

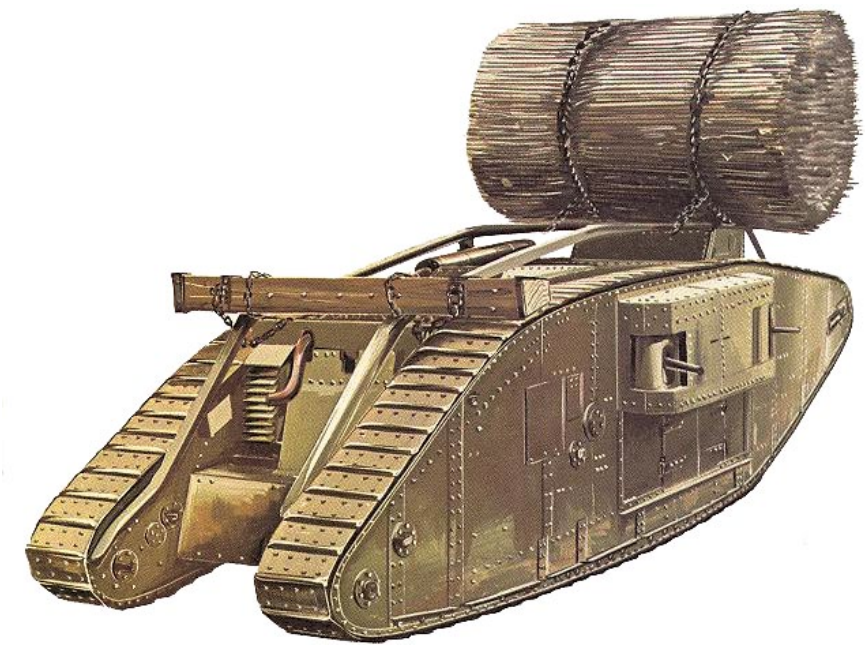

Image provided by author

Figure 3: The 'Female' Mk IV tank had thicker armour than the Mk I, mounted Lewis guns and enormous fascines (bundles of brush wood) which, when dropped ahead of the tank into a deep ditch helped it cross unimpeded

Another design of combat/carrier tank deployed at Amiens was the Mark V Star. It was essentially an elongated Mark V that had the capacity to carry a machine-gun crew or infantry section to the front lines with a degree of protection from bullets or shrapnel.[51] The Mark V Stars were a new innovation and were theoretically capable of delivering infantry to critical junctures of the battle to either exploit a breach or plug a gap in the line. Similar to the resupply tanks, these armoured infantry carriers were considered vital to the consolidation phase of the battle. The resupply tanks would play a crucial role in consolidation, but as will be illustrated below, the Mark V Stars did not live up to their expectations. Ultimately, 324 heavy fighting tanks and 72 Whippets were allocated for the Amiens offensive. An additional 96 converted Mark IVs and 22 gun-carriers were earmarked to transport supplies.[52]

The differences in speed and firepower between these tank designs were incorporated into the overall operational plan for 8 August. Monash's decision to view the tank primarily as an infantry-support weapon was reflected in his deployment of the heavy tanks to assist the infantry against German machine-gun and defensive positions.[53] Each infantry battalion detached a scout to serve as a liaison between tanks and the infantry they were supporting.[54] Between the Australian and the Canadian Corps, a policy of roughly "one Tank, one [infantry] Company" was adopted, although the numbers varied depending on the final objective of the infantry battalion.[55] When the first day's objectives were completed, the heavy tanks were ordered to fall back from the lines they helped capture to refit and refuel for the resumption of the offensive on 9 August.[56]

The Whippets, on the other hand, were intended to exploit the breach in the German lines hacked open by the heavy tanks and the infantry. A number of them were assigned to operate with the Cavalry Corps to harry the German rear areas and ideally exploit a major breakthrough on the Western Front.[57] This inclusion of the cavalry reflected the persistent dream of Haig to use the cavalry to drive deep behind German lines to prevent the enemy from consolidating after the initial blow.[58] Haig's fixation on the cavalry breakthrough nevertheless failed to produce any positive results by 1918 because the horsemen were horrendously vulnerable to machine-gun fire.[59]

The Royal Air Force was also intended to play an important role at Amiens. In addition to the usual role of aircraft as spotters for artillery, eight squadrons (seven fighter and one bomber) were assigned to support the Fourth Army. Each corps (British III, Australian, Canadian and Cavalry) was detached a fighter squadron for support.[60] Other squadrons were detailed with dropping supplies, conducting strafing runs as well as bombing bridges and German aerodromes.[61] This combination of artillery, infantry, tanks and aircraft at Amiens was indicative of the all arms battle's complexity and shock value.[62] Ultimately, the deployment of tanks and numerous aircraft alongside the elite Dominion troops illustrates Haig and Rawlinson's intention to overwhelm the Germans in front of Amiens at the smallest possible cost.

THE BATTLE OF AMIENS

In order to ensure fresh reserves would be able to exploit the opening shock of the offensive, the advance of 8 August was divided into three successive objectives: the Green Line, the Red Line and the Blue Dotted Line. In Canadian reports and the official history, the last line is referred to as the "Blue Dotted Line," whereas Australian accounts refer to the "Blue Line." For the sake of clarity, this paper will refer to it as the Blue Dotted Line. Depending on the attacking battalion, the Green Line was roughly three to five kilometres away from the start line.[63] It represented the outer German defensive line and was in a poor state of repair despite the Germans' occupation of the position for four months.[64] The 1938 history of the 31st Battalion CEF notes disparagingly that:

> *For the most part the defences consisted of discontinuous trenches, organized shell holes with machine guns, strong points, and the fortification of such natural obstacles to advancing troops as the topography of the country afforded. Contrary to the usual Germanhabit, comparatively ittle wiring had been done.*[65]

The poor conditions of these defences were a major factor in the selection of the Amiens sector for an assault. Rawlinson noted that the "bad" defences, "poor morale" and lack of substantial German reserves made Amiens the ideal location for a major offensive.[66] Indeed, Ludendorff expected the Spring Offensives to resume shortly and, so, viewed the defensive posture at Amiens as merely temporary.[67]

Surprise was crucial to the Amiens operation. Effective deception operations involving dummy radio traffic and the deployment of a handful of Canadian troops near Ypres convinced German commanders that they should expect an attack in Flanders rather than around Amiens.[68] To further preserve surprise, the typical preparatory barrage was withheld until the attack began at zero hour, 4:20 a.m. on 8 August.[69] Gunner Wilfred Kerr noted that abruptly at zero hour "the whole crest of our rear was ablaze with a dazzling array of flashes followed by waves of roars."[70] The tanks and infantry were then ordered forward to follow the creeping barrage as close as possible so as to close with the dazed Germans before they could recover.

THE GREEN LINE

CANADIANS

The attacking brigades of each division were intended to "leapfrog" through each other to maintain the tempo of advance.[71] The 2nd Canadian Division was responsible for assaulting along the entire left flank of the Canadian Corps from the jump-off to the Blue Dotted Line. The 1st Canadian Division would advance through the centre of the Corps' frontage until the Red Line, with its 2nd CIB also assaulting the Blue Dotted Line. The 3rd Canadian Division attacked along the right flank of the Corps and was intended to assault from the jump-off to the Red Line. The 3rd Cavalry Division of the Cavalry Corps was then tasked with attacking the Blue Dotted from the Red Line, though they were ultimately unsuccessful in their task. The 4th Canadian Division was held in reserve, but was committed in an attempt to capture the Blue Dotted Line following the failure of the Cavalry Corps to secure its objectives.[72] The 1st, 4th, 5th and 14th Tank Battalions of the 4th Tank Brigade were detached to the Canadian Corps for the 8 August assault.[73]

Image provided by author

Figure 4: Field Marshal Paul von Hindenburg (left) with quartermaster general Erich Ludendorff (right)

The battlefield was cloaked in a dense fog when the tanks and infantry advanced at zero hour. Corporal Deward Barnes of the 19th Battalion CEF noted that "you could not see ten feet in front of you for the mist."[74] The fog hampered infantry-tank coordination and caused battalions to experience radically different cooperation with tanks than other units down the line. For example, on the Corps's right flank, the 58th Battalion CEF reported that the mist "made progress difficult," but the four tanks allotted to it nevertheless did "excellent work" in helping the infantry clear up machine-gun nests and other strong points.[75] The quick execution of the attack and the valuable tank support drove down the battalion's casualties, and the 58th sustained an "extremely light" 144 casualties on 8 August.[76]

Three kilometres away, the 13th Battalion CEF of the 3rd CIB reported that their seven tanks "were of very little assistance" due to the mist. The German strong points of Hangard Wood and Croates Trench would consequently have to be taken through infantry assault.[77] During the 13th's attack on Croates Trench, more tanks were called for but were knocked out before they could render assistance.[78] The absence of tank support left the infantry vulnerable to heavy German machine-gun fire from these strong points. The 13th suffered horrendous losses. Its war diary states that the majority of the battalion's 295 casualties of 7–21 August occurred during the initial attempt to capture Hangard Wood.[79]

The varied performance of the tanks as they advanced in heavy mist towards the Green Line was also illustrated by the battalions of the 4th CIB, which was in contact with the 7th Australian Infantry Brigade (AIB) on the Canadians' left. The 18th and the 19th Battalions CEF, attacking the five kilometres side by side towards Marcelcave, reported two very different experiences working with tanks.
The 18th, which advanced quickly to the Green Line with light casualties, commented that their cooperation with the tanks "was one of the finest features of the day."[80] The 19th, however, reported that the seven tanks detailed to support it got lost and "did not get into action until after the final objective had been gained."[81] The infantry were therefore forced to assault the strong points unsupported and sustained 158 casualties.[82]

The Canadian attack on the Green Line illustrates the tanks' varied contribution to the all arms approach. In certain instances, tanks cooperated with infantry and artillery to swiftly capture an objective. In other cases, tanks were lost in the fog and were unable to assist the infantry. Canadian units captured the Green Line at different times, the 4th CIB attaining its objectives at 7:45 a.m. and the 3rd CIB not reaching the Green Line until 9 a.m.[83] Nevertheless, the Green Line was captured on schedule for the follow-up assault on the Red Line.

AUSTRALIANS

The Australian brigades assaulted German positions in a similar manner to the leapfrogging of Canadian units. The 2nd Australian Division attacked the Green Line along the right of the Australian Corps—the left flank of the Canadians. The 3rd Australian Division assaulted the Green Line along the left flank of the Australian frontage. The 2nd was then leapfrogged by the 5th Australian Division for the attack on the Red and Blue Dotted Lines. Similarly, the 4th Australian Division followed through from the 3rd.[84]
The 2nd, 8th, 13th and 15th Tank Battalions of the 5th Tank Brigade were detailed to assist the Australian Corps on 8 August.[85]

The Australian Corps was similarly enshrouded in the dense mist as the troops sought out their objectives along the Green Line. On the Australians' extreme right flank, the 26th Battalion AIF of the 2nd Australian Division attempted to advance to its initial objectives and maintain contact with the 4th CIB on its right. The battalion's war diary notes that the thick fog meant "cooperation with the tanks was practically impossible," and that the infantry were forced to assault their objectives without direct tank support.[86] Nevertheless, the 26th was able to overcome weak German resistance and a few resolute machine-gun teams that "fought to the last."[87] The battalion reported that the groping tanks simply sought out any German machine-gun post they could find in the blinding fog, but the 26th evidently accomplished their objectives with little direct assistance from tanks.[88]

In the middle of the Australians' frontage, the 33rd Battalion AIF similarly pushed forward briskly at zero hour. Its commander, Lieutenant Colonel Leslie Morshead, noted that the fog was "certainly to our advantage" in obscuring the battalion's assault from the Germans.[89] Morshead further wrote that "the tanks were of no assistance" and were often behind the troops advancing towards the Green Line. When the fog lifted, however, the tanks "did excellent work" and "delighted" the men by demoralizing the Germans.[90] Morshead also commented on the critical value of the supply tanks, whose role in freeing up "infantry carrying parties" and providing of immediate supplies "cannot be overestimated."[91] The 33rd reported consolidating its hold on the Green Line at 7:30 a.m.[92]

Similar to the Canadians, the Australian assault on the Green Line witnessed inconsistent success of tanks. Some infantry battalions were able to seize the element of surprise and the creeping barrage to attain their objectives even when tanks were lost in the mist. Others cooperated closely with the tanks and exploited their shock value as much as possible against the dazed German defenders. In any event, most Australian units reached their objectives roughly from 7:00–7:30 a.m.[93]

OTHER ALLIED FORCES

Given that the Canadians and the Australians were intended to spearhead the advance, the attacking units on either side of these two Dominion Corps were detailed to provide flank support rather than deep penetration of the German defences. To the Australians' left, the British III Corps was severely weakened by the intense fighting of the Spring Offensives and a surprise German raid on 6 August.[94] They were also only detailed a single tank battalion for support and, consequently, made less headway on 8 August.[95] Their slow progress had devastating results when the Australians advanced on the Blue Dotted Line.

On the Canadians' right flank, the French First Army was not allocated any tanks for the assault and consequently attacked 45 minutes after zero hour so that a preparatory barrage could soften up the German defences.[96] Similar to the British III Corps, the French had difficulty keeping up with the Dominion advance. However, the Canadian Independent Force (CIF), a force of armoured cars under Brigadier General Raymond Brutinel, protected the Canadian right and maintained liaison with the French.[97] The difficulties these forces experienced in keeping up with the rapid Dominion advances meant that the Germans on either flank were able to pour a punishing enfilade fire on the tanks of both Corps as they ground towards the Red and Blue Dotted Lines.

THE RED AND BLUE DOTTED LINES

As the leading battalions consolidated their gains on the Green Line around 8:00 a.m., the next wave of infantry brigades and their supporting five or six tanks[98] leapfrogged through the first objective on their way to the Red and Blue Dotted Lines. By 6:30 a.m. the morning fog had begun to burn off and revealed the battlefield to the combatants.[99] This proved to be a mixed blessing, however, because the mist which hindered the tanks' cooperation with their accompanying infantry also cloaked them from deadly enemy field guns. The Germans quickly learned that direct fire from their field artillery pieces over open sights was an extremely effective means of knocking out tanks. Indeed, a captured German document from August 1918 stipulated that "field artillery becomes permanently responsible for the engagement of tanks."[100] The lumbering Mark Vs were thus suddenly exposed when the mist burned off and were in grave danger from field gunners unless their accompanying infantry could drive off the German artillerymen.

CANADIANS—THE RED LINE

The Germans held the Red Line in force with a considerable number of machine-guns, but they evidently did not deploy enough field artillery pieces in the sector to hinder the tanks accompanying the Dominion infantry forward. The 3rd Battalion CEF jumped off from the Green Line around 9:00 a.m. to begin its three-kilometre assault on the Red Line. It was quickly met with intense German machine-gun fire. The 3rd's battle narrative noted at 9:55 a.m. that it was "impossible to get forward" unless the battalion was sent immediate reinforcements or a few tanks, as "casualties [were] extremely heavy."[101] Ultimately, the battalion was able to push on to the Red Line at 11:55 a.m. when a tank arrived and the infantry outflanked the German strong points. The narrative noted that "it is very doubtful if we would have been able to have gotten forward . . . if it had not been for the timely intervention of a tank."[102] The battalion suffered 200 casualties alone on 8 August, which serves as evidence of the Germans' stiffening opposition.[103] The potential for even worse casualties also illustrates the importance of the tank's intervention at a crucial juncture in the battalion's assault.

The 26th Battalion CEF of the 5th CIB, attacking on the 3rd Battalion's left flank, reported similar success with its tanks. The battalion ran into considerable German machine-gun and rifle fire from Snipe Copse, but was able to secure its objectives with the help of tanks.[104] Captain C. A. Moore of the 26th noted that "too much cannot be said" about the support rendered by the tanks during the battalion's assault against machine-guns as well as a battery of German 77 mm field/antitank guns.[105] Indeed, the 5th CIB narrative reported that the "excellent service" from tanks "enabled the infantry to advance much farther than would have been possible otherwise."[106] By 10:30 a.m., tanks were reported on sections of the Red Line.[107]

Several important lessons may be drawn from the cases of the 3rd and 26th Battalions. They illustrate the tanks' ability to provide extra impetus to infantry units pinned down by intense German fire and to help them overcome a difficult objective. They also convey the potential successes of close cooperation between tanks and infantry in the advance when the attacking neighbours are maintaining the tempo of the assault. The experience of these two battalions further illustrates that Dancocks' claim that tanks were "too primitive" at Amiens is not representative of the entire battle. The Australians will exhibit, however, combat tanks' severe limitations when they were confronted with imperfect flank protection.

AUSTRALIANS—THE RED AND BLUE DOTTED LINES

In the Australian sector, the Red and Blue Dotted Lines were much closer together than for the Canadians, and so many of the second-wave battalions were detailed to capture both objectives. In contact with the Canadians' left flank, the 15th AIB pushed forward to the Red and Blue Dotted Lines at roughly the same pace as their Canadian neighbours. The 57th Battalion AIF began the assault on the Red Line promptly at 8:20 a.m. with a full complement of six tanks, which were "of great assistance" whenever the battalion ran into a German machine-gun nest.[108] The 57th encountered stout German resistance, but the infantry and tanks neutralized enemy field batteries and strong points despite losing a tank to a direct hit from a 5.9 inch howitzer.[109] The battalion captured its objectives in a timely fashion, and Second Lieutenant A.M. Williams remarked that "the work of the tanks was magnificent right through."[110] The 46th Battalion AIF reported similar success in the middle of the Corps frontage, and the tanks "did wonderful work" despite difficulties traversing the various gullies crisscrossing the battlefield.[111]

The left flank of the Australian Corps was a different matter. The inability of the British III Corps to keep pace with the Australians enabled the Germans to pour enfilade fire on the Australian tanks and infantry advancing toward the Red and Blue Dotted Lines. In particular, German 77 mm batteries on the dominating Chipilly Spur proved increasingly troublesome to the assaulting formations.[112] The 15th Battalion AIF notes that although the three tanks allotted to it for the attack were "up and making good progress" at the start line, they were all quickly put out of action by 77 mm fire from Chipilly.[113]

The 16th Battalion AIF relates a similar story. The commanding officer, Lieutenant Colonel Edmund Drake-Brockman, noted that four of the five Mark V Star tanks detailed to assist the battalion and carry machine-gun crews forward failed to reach the Green Line due to mechanical trouble.[114] Nevertheless, a section of five Mark Vs accompanied the battalion during its drive to the Blue Dotted Line and was almost immediately met by a curtain of fire from the Chipilly Spur. Four of the tanks were knocked out by the accurate 77 mm fire before reaching the final objective, and the last tank was destroyed along with most of its crew when crossing the line.[115] Captain W. J. Lynas of the 16th noted that the tanks were "too unwieldy" to avert the storm of German fire and were "too slow" to outpace it.[116] He nevertheless commented optimistically that "bad luck and a few brave 77 artillerymen" were the ultimate causes of the tanks "not coming up to my expectations."[117] Ultimately, the 16th sustained horrendous casualties on 8 August. It lost 40 percent of its combat strength from a combination of punishing German fire from Chipilly and the decreasing presence of tanks during the assault.[118] Nevertheless, the battalion reached the Blue Dotted Line by 12:30 p.m.[119]

These two vastly different reports on the tanks' performance at Amiens are instructive in their varied contribution to the all arms battle. With secure flanks and solid infantry support, the tanks were able to assist the infantry's capture of German defensive positions. When confronted with an exposed flank,

however, the tanks were extremely vulnerable to German antitank fire and were rapidly put out of action. These shortcomings are no fault of the tanks themselves, and it is evident that the infantry suffered heavily alongside the tank crews when under intense German fire. These examples also illustrate that arguments by Fuller and others that tanks were the decisive element at Amiens tend to overlook the tanks' difficulties at critical moments of the battle. Indeed, the Australians attained their objectives even when enemy action neutralized tank support.

An important factor to consider at this point in the offensive is the declining influence of Allied artillery over the course of 8 August. The intense barrage that was so critical in subduing the Germans on the Green Line became increasingly sporadic as the infantry and tanks outstripped the range of the field artillery and left them exposed to dug-in German infantrymen.[120] Allied generals attempted to remedy this shortcoming by ordering horse-drawn field batteries to follow the infantry's advance,[121] but these units were unable to provide the same crushing barrage that aided the assault at zero hour. Furthermore, the tanks' intended role as a surrogate for an artillery barrage was strained by their stark vulnerability to German antitank fire. Indeed, the grim experiences of the 16th Battalion AIF illustrate the tanks proved too fragile in many cases to offer close artillery support.

Also important to consider is the role of supply tanks hauling ammunition, water, entrenching tools and wire to the outermost infantry preparing to repel German counterattacks. The six supply machines of the 1st Gun Carrier Company brought up 57,813 pounds of supplies for Australian units on 8 August.[122] It would take 578 men with tumplines to haul a similar volume of material. The average distance "trekked" for this supply company was 21.5 kilometres.[123] It is difficult to imagine nearly 600 men hauling 100-pound loads and traversing an average of 20 kilometres for an entire day in the burning August sun under enemy fire to keep the front lines stocked with supplies. The achievements of the supply tanks are even more remarkable given that their distance covered on 8 August was roughly *twice* the expected range of Mark IV tanks.[124] Nevertheless, the converted Mark IVs established supply dumps about 450 metres away from the successive defensive lines. The steady stream of ammunition, entrenching tools and water enabled the infantry to dig in and prepare to repel any German counterattacks.[125]

CANADIANS—THE BLUE DOTTED LINE

Similar to the Australians, Canadian battalions attacking the Blue Dotted Line had a range of distances to cross. On the Canadian left, the Blue Dotted Line was approximately 2.5 kilometres from the Red Line. On the Corps right, however, the distance between the two objectives was almost 6.5 kilometres.[126] As the Canadians advanced towards the Blue Dotted Line, they were confronted with the wild spectacle of a full-tilt cavalry charge when Haig made his bid for a major breakthrough. The attacking 3rd Cavalry Division, in conjunction with a number of Whippet tanks, was tasked with capturing a length of the Blue Dotted Line and exploiting the breach in the German line to harass the rear areas.[127] The attack, however, was largely a failure due to the cavalry's horrendous vulnerability to machine-guns. Gunner Kerr recalled that the Royal Canadian Dragoons of the Canadian Cavalry Brigade "went down like ninepins" in the face of intense German fire.[128] The Whippets were also a disappointment, being too slow to keep up with the cavalry, while the horsemen were too vulnerable to machine-gun fire to effectively support the Whippets.[129] The failure of the cavalry and the Whippets to consolidate their objectives meant that Blue Dotted Line would have to be captured by the Canadian infantry and their accompanying tanks.

On the Corps's left flank, the 29th Battalion CEF of the 6th CIB was tasked with conducting the final advance of 8 August to the Blue Dotted Line. The Canadians' stretch of the Blue Dotted Line was situated along the "outer Amiens defence line," a more permanent network of German strong points.[130] The 29th was allotted three tanks for the attack, which were "very successful for the first 1000 yards," but were quickly distracted by other assignments.[131] The battle narrative of the battalion notes that one of the tanks was detached to assist the 31st Battalion CEF on their right, another to the Australians on their left, while the third was knocked out by a German field gun.[132] The narrative resolutely comments that this sudden absence of tank support "did not hold up the advance in any way," and the battalion proceeded to capture its objectives.[133] German defences were evidently so sparse that the 6th CIB narrative commented

the Blue Dotted Line "was occupied without opposition."[134] Canadian units captured this centre stretch of the Blue Dotted Line around 2:30 p.m.[135]

On the Corps' extreme right flank, however, the Canadians encountered stiff opposition in the hamlet of Le Quesnel, approximately 9.5 kilometres from the jump-off line. The attacking battalions were "entirely outside of the field gun barrage zone," and so the "barrage" would be "supplied by cavalry, tanks, heavies [heavy siege guns]" and whatever field pieces managed to be hauled forward.[136] The Germans stationed a number of artillery batteries and machine-guns around the village, and every attempt to capture it was beaten off. The 75th Battalion CEF was tasked with taking Le Quesnel but "it was quite evident that [its] tanks had been put out of action" by German fire.[137] Bereft of artillery and tank support, the 75th war diarist bitterly commented that the battalion was forced to assault Le Quesnel "without any assistance whatever."[138] Ultimately, German resistance proved too strong for the attacking battalions, and Le Quesnel did not fall until the early morning of 9 August.[139]

Le Quesnel was a hornet's nest to all of the units attacking it. A single German battery knocked out ten tanks assisting the Canadian assault on the village.[140] Indeed, the 54th Battalion CEF reported that of the three tanks detached to it for the attack on Le Quesnel, two were knocked out and the other was "partially disabled" and forced to withdraw.[141] The 54th sustained a light 62 casualties, however, and maintained a cheerful attitude towards the contribution of "our steel comrades, the tanks."[142] The 75th's bitter indictment of tank support, therefore, must be understood within the context of their costly assault. When the infantry sustained heavy casualties, they were evidently not as likely to appreciate the tankers' 9.5 kilometre trek under heavy fire in notoriously unreliable machines to support the assault. Indeed, the fact that most tanks would have been on the move since 4:20 a.m. illustrates that the crews' maximum endurance of twelve hours was sorely strained by the constant advance of 8 August.[143]

The tanks' shortcomings at Le Quesnel were the Canadian counterpart to the Australian experience at Chipilly. Many of the Mark Vs were knocked out before they could help the infantry assault the village. The Mark V Stars also failed to live up to their promise and were unable to deliver the infantry at critical junctures in the manner they were intended.[144] The experiment was largely a failure because the machine-gun crews inside the tanks were overwhelmed by the intense heat and engine exhaust circulating freely through the crew compartment. According to an Australian after-action report, the troops were "incapable of movement" for three to four hours after disembarking the Mark V Stars.[145] The armoured infantry consequently played little role in consolidating the captured territory in anticipation for a counterattack.

ASSESSMENT FROM THE BATTLEFIELD

These experiences of 8 August on the Green, Red and Blue Dotted Lines convey that tanks were useful in some cases and a disappointment in others. Their valuable contribution to the all arms approach was evidenced in the smooth advances of some battalions. Their misdirection in the fog and stark vulnerability to German fire, however, meant that several infantry units were forced to attack without tank support. These battalions typically sustained heavy losses on 8 August and vociferously criticized the performance of tanks. Both perspectives on the tank's performance are valid. The events of 9–18 August would nevertheless illustrate the tank's crippling fragility in sustained operations. They would also illustrate the importance of the prompt logistical service provided by the resupply tank companies.

THE BATTLE OF AMIENS: 9–18 AUGUST

The 13-kilometre advance of the Canadian Corps and the 11-kilometre advance of the Australian Corps on 8 August represent some of the most striking successes on the Western Front.[146] Ludendorff infamously lamented that 8 August was the "black day of the German Army" due to the collapsing morale and inability of German soldiers to beat back their Allied counterparts.[147] Ludendorff further commented that after 8 August the combination of tanks and artificial fog "remained our most dangerous enemies" and that the crumbling morale of the German soldier made tanks far more effective

on the battlefield.[148] Ludendorff's judgments are frequently invoked in most discussions of Amiens but his word should not be taken for granted. Indeed, the declining presence of tanks on the battlefield after Amiens indicates that claims of German defeat by massed tanks may be viewed as exaggerated to say the least.[149] "The Black Day" was not the only day of the Battle of Amiens, however, and tanks played an increasingly marginal role in the Allies' continued effort to exploit the gap they hacked open on 8 August.

The intense fighting and constant movement of 8 August exhausted the tank units to such an extent that only 145 out of the original 420 tanks were fit for battle the following day.[150] Walking the battlefield on the 9th, Gunner Kerr noted that the hundreds of burnt tank hulks were "proof that tanks could do little in daylight against field guns."[151] Not only the machines themselves, but also their crews suffered a heavy toll on the opening day of the offensive. Many of the crew personnel were incinerated when their machines were hit by German antitank fire or were too physically ill from the engine exhaust to keep up with the rapid infantry advances of the Amiens campaign.[152] Nevertheless, the remaining functional tanks were committed alongside the infantry and declining artillery support to resurrect the all arms success of 8 August against the stabilizing German defensive positions.

CANADIANS

The Canadians' resumption of the offensive on 9 August was uncoordinated across the whole front as communications difficulties plagued the units due to the rapid tempo of the previous day's advance. When the 29th Battalion CEF continued the attack at 11:00 a.m. on the 9th, the tanks detailed to assist the battalion were delayed by engine trouble, forcing the battalion to attack without them.[153] Lacking the complete surprise and devastating artillery support of the previous day, Lieutenant L.S. McGill wrote on 12 August that soldiers of the 29th "were dropping in considerable numbers all down the line" during the attack.[154] Tanks were able to reach the front later in the day, but their inability to reach the start line in time left the infantry terribly vulnerable.[155]

Its sister battalion in the 6th CIB reported a similarly disappointing interaction with tanks on 9 August. The 31st Battalion CEF conveyed dissatisfaction with the tanks' truancy on the 9th, and its history notes that the attack was "entirely unsupported by tanks at the outset."[156] The clear weather made the remaining tanks inviting targets for German gunners defending across the wide-open fields beyond Le Quesnel. Ultimately, three out of the five tanks allocated to the 6th CIB were knocked out before the objective was finally captured by infantry without the support of either tanks or artillery.[157] Nevertheless, the Canadians were able to advance a further six kilometres on 9 August, a remarkable distance given the complete lack of surprise.[158]

AUSTRALIANS

The Australian battalions resuming the attack on 9 August experienced the same lack of sufficient artillery support and stiffening German opposition. The 8th Battalion AIF of the 2nd AIB attacked towards Lihons with the Canadians on its left flank. The 14 tanks detailed to assist the brigade managed to advance over a kilometre before they were "soon put out of action by enemy artillery."[159] The "unaided" 8th Battalion nevertheless made a "very slow and costly advance" against machine-gun and 77 mm positions without the assistance of tanks. Consequently, the battalion's numbers were "greatly reduced by casualties" during the unsupported advance.[160]

The 25th Battalion AIF experienced a similar decline of tank support in its attack on Vauvillers on 10 August. The five tanks detached to assist the battalion were quickly put out of action, three due to mechanical breakdown and two from enemy fire.[161] The battalion enjoyed "absolutely no artillery or tank assistance" against the stout German positions, and the attack was prematurely halted to avoid incurring excessive casualties.[162]

While the combat tanks sustained heavy casualties, the infantry supply tanks continued to haul vital ammunition and water to the infantry at the sharp end of the battle. The tens of thousands of pounds of supplies brought forward by the mechanized carrier companies enabled the infantry to cling to their precarious forward positions against furious German counterattacks. For example, when the 8th was consolidating its newly-captured positions, the Germans counterattacked with 300–400 men at 9:30 p.m. on 9 August. The attack was ultimately repulsed "with severe losses to the Germans."[163]

The experiences of the 11th Battalion AIF further illustrate the importance of resupply in the face of enemy assaults. In the early morning of 11 August, the 11th battalion repelled four separate German counterattacks. The battalion reported inflicting "severe casualties" on the Germans with "rifle, Lewis Gun and 36 Grenade fire."[164] The battalion was situated north of Lihons, approximately 15.5 kilometres from the 8 August start line.[165] This extreme distance meant that small arms were relied upon to repel counterattacks to compensate for the severe lack of artillery support. Such battalions, therefore, depended upon constant resupply of ammunition and entrenching tools, without which they would have no defence against counterattack. The fact that the 11th Battalion AIF was sufficiently supplied to repel *four* German counterattacks so far from the start line is a testament to the indispensable role Mark IVs and gun-carriers played in the consolidation phase of the battle.

AFTERMATH OF THE BATTLE: THE END OF TANKS

The dwindling presence of combat tanks on the battlefield continued throughout the rest of the Battle of Amiens. Only six combat tanks were fit for battle on 12 August.[166] Nevertheless, the Allies continued their assault on the Amiens front until they reached the old network of Somme trenches that were overrun by the German offensives in late March, almost 22 kilometres away from the 8 August start line.[167] The Fourth Army evidently experienced difficulty hauling enough field guns forward to support the advance, as the battalion reports convey a steadily declining volume of artillery fire as the infantry advanced farther from the jump-off line. Indeed, Currie decided that attacking the maze of trenches and rusting wire without either the element of surprise or adequate artillery support "would be altogether too costly an operation." He convinced Haig to call off future attacks.[168] The Allies' attempt to replicate the successes of 8 August and break through German lines ultimately did not pan out. Indeed, their uncoordinated and costly follow-up assaults were dismissed by the Australian official history as a prime example of "how not to follow up a great attack."[169]

The battle was not a cheap victory. The Canadians alone suffered almost 12,000 casualties over the 10 days of battle; 9,000 occurred during the intense fighting of 8–11 August.[170] The Australians sustained fewer losses, but the 6,000 casualties of the Amiens campaign still represent a tragic human cost.[171] These staggering figures convey the primary role that attacking infantry played throughout the Battle of Amiens. As many of the infantry battalions reported, however, casualties could have been far worse had tanks not provided vital assistance at key junctures. Indeed, the tanks themselves suffered an even higher attrition rate than the infantry. Ninety-nine fighting tanks of the 4th Tank Brigade assigned to the Canadian Corps were lost from 8–13 August alone.[172] Ultimately, 480 of the 668 tanks (70 percent) of all types were beyond repair after Amiens.[173] The tank losses were so debilitating that Amiens was the last offensive where massed tanks were employed in the First World War.[174]

The performance of tanks following 8 August conveys their fickle performance at Amiens. Their heavy losses sustained on the 8th confined them to a minor supporting role in the resumption of the infantry's offensives. Nevertheless, the Allies were able to make substantial gains on 9 August without the benefit of surprise, heavy artillery or significant tank support. The consolidating German artillery positions badly mauled any tanks that attempted to advance with the infantry. Consequently, many Canadian and Australian battalions became increasingly bitter over the performance of tanks when they were forced to assault German positions unsupported. The tanks, nevertheless, made a valiant effort to support the infantry wherever possible despite the strains from the long advance. Furthermore, supply tanks

ensured the infantry would have enough ammunition, wire and water to repulse the ubiquitous German counterattacks. The fact that tanks continued to attack even with the covering mist and element of surprise evaporated is a testament to the courage and determination of the tank crews at Amiens.

CONCLUSIONS

The tanks' varied performance throughout the Battle of Amiens illustrates their mercurial contribution to the offensive's overall success. In certain instances they proved exceptionally useful in mitigating casualties and providing morale boosts to beleaguered infantry units. In others, the tanks were unable to provide assistance, and the infantry were forced to capture the objective on their own at high cost. The two formations discussed in this study, the Canadian and Australian Corps, held radically contrasting attitudes on tank warfare prior to the battle. Their prior experiences with tanks, however, did not significantly influence their experiences at Amiens.

The tanks were intended to provide direct fire support in some cases and to exploit the breakthrough in others, but on both counts the success of their mission was mixed. During the opening moves of the battle (the rapid assault on the Green Line), some tanks became lost in a dense mist and left the infantry largely to their own devices. Others were able to maintain contact with their infantry thorough the mist and helped overcome outlying German defences. The attacks on the Red and Blue Dotted Lines also illustrated varied levels of tank success. The continuation of the battle subsequent to 8 August witnessed a steadily declining tank presence as they were successively put out of action due to German fire or mechanical breakdown. Nevertheless, the advance continued through the efforts of the infantry until the maze of the old Somme trenches and the lack of artillery support caused prudent commanders to call off future attacks before the losses became too high. Throughout the battle, supply tanks maintained a steady flow of logistical support that freed up infantry units and provided front line battalions with enough supplies to survive German counterattacks.

This study sheds light on a few important facets of the historiographical controversy surrounding tanks at Amiens. The divergence of opinion between Fuller's view that the tank was decisive or Dancocks' assertion that tanks were "too primitive" is far too pronounced given the evidence presented in the war diaries. The success of tanks varied across the battlefield. A "black-and-white" verdict on their performance by definition neglects their failures in some instances and their triumphs in others. The opposing views conveyed by the Canadian and Australian official histories are also unsound. The tank warfare experience for both Dominion formations was the same at Amiens in the sense that both Corps witnessed varying levels of tank success. Ultimately, the most prudent conclusion to reach from the myriad of contrasting reports is that tanks presented a valuable but problematic component of the all arms battle. Tanks provided critical support in certain locations and bitterly disappointed their accompanying infantry in others. Ultimately, the attitudes of the "poor bloody infantry" towards their armoured counterparts were as fickle as the performance of the tanks themselves.

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ENDNOTES

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88. *Ibid.*
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98. The 6th CIB narrative notes that five tanks of "C" Coy, 14th Tank Battalion were detailed to assist the brigade's advance onto the Blue Dotted Line. See LAC MG 30 E6 Volume 1, File: Burstall Papers, Amiens, Summer 1918, 6th Canadian Infantry Brigade, "Narrative of Operations: 8th, 9th, 10th August 1918," p. 4, dated 13 August 1918.
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100. LAC RG 24, Volume 22, 020, "Translations of A German Document: Anti-Tank Defence," p. 2.
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128. Kerr, *Arms and the Maple Leaf*, p. 87.

129. Cook, *Shock Troops*, p. 433.

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Source: Combat Camera

MAJOR-GENERAL FREDERIC FRANKLIN WORTHINGTON, CB, MC, MM, CD (17 SEPTEMBER 1889–8 DECEMBER 1967)

Sergeant K. Grant, CD

For those who read the Canadian national newspapers the name Worthington will be familiar. Peter Worthington has won four National Newspaper Awards, interviewed notable personages, was the founding editor of the Toronto Sun (where he continues to write a column), and like a latter day journalistic Harry Flashman, seemed to have been everywhere covering everything through the 1950s, '60s and '70s. Militarily, he is no slouch either. He fought in World War II as a member of the Royal Canadian Navy Volunteer Reserve (RCNVR) serving as an air gunner in the Fleet Air Arm until his discharge in 1946 at the rank of Sub-Lieutenant (equivalent to the army's Lieutenant). In the Korean War he was a platoon commander, battalion intelligence officer in the Princess Patricia's Canadian Light Infantry (PPCLI), and ended the war with the U.S. Air Force, directing air strikes against enemy targets.

But this biography is not about Worthington the son (though it would make for an interesting read), but rather it is about Worthington the father; Major-General Frederic Franklin (Fighting Frank) (Worthy) Worthington, CB, MC (and Bar), MM (and Bar), CD, the man who, for those in the Royal Canadian Armoured Corps, is well known and loved as the "father of the corps."

Fredric Franklin Worthington was born in Scotland in 1889. While still a child he and his parents undertook the arduous journey to cross the Atlantic, and then a continent to build a life in California. Sadly, when Fredric was 11 years old both his parents died and he was forced to move again, this time he was sent to live with is half-brother in Nocorzari, Mexico.
But tragedy soon followed when, a year after his arrival, his brother was killed by the notorious bandit Pancho Villa in an altercation, leaving the 12 year-old Fredric all alone.

"Fighting Frank" had what can be euphemistically called a colourful history.
At age 14 the young Fredric began a four-year sea-going career as a cabin boy on a series of cargo ships. But the sea life did not fully take hold and when opportunity presented itself he found himself back on dry land.

Canadian Forces Joint Imagery Centre ZK 578 CD 485 IMG 0049

Figure 1: MGen F.F. Worthington, The informal portrait

Some have suggested that he began his military career as a mercenary. Though the definition of the term remains largely in the eye of the beholder, what is known is that unofficially his military service began at the age of 18 as an officer in the Nicaraguan Army in the war against San Salvador and Honduras. But his career was short-lived and when the Nicaraguan government fell, the army dissolved and, as a non-resident, Fredric quickly fled the country back to a life on cargo steamers in an effort to avoid capture.

But action was a draw for the young man and he soon found himself back in the thick of things by running guns into Cuba. This time he was caught and did a spell in prison in 1908 for his transgressions.

In 1913, he was back on land again when he fought on the side of Francisco Madero in the Mexican Civil war against the Dias government. However, when he was wounded in a battle he decided that he'd had enough, and following his recuperation he left Mexico for good, returning to the sea to sail on cargo steamers and where eventually earned his Board of Trade papers as a Second Engineer.

By 1915 the First World War was well and truly under way and Frank, now 26, travelled to Montreal with the intent of going on to England to join the Black Watch Regiment of Scotland. But when he came across a recruiting office in Montreal, he figured he could save the cost of passage to Britain by joining in Canada. Without realizing it, he had enlisted in the Canadian Black Watch, and in so doing, automatically became a Canadian citizen.

Because of his previous military experience, Frank quickly stood out in the eyes of his superiors, if not always for the good. During a training exercise for instance, Lance-Corporal Worthington was disciplined for using the sneak attack techniques (crawling, using cover, etc.) he had learned as a guerrilla fighter to capture an "enemy" target. As recalled in Larry Worthington's biography, Worthy was told that ". . . no British soldier crawls into battle on his belly . . . Stand up and march briskly forward." Curiously, Worthington's was the only section to achieve its objective.

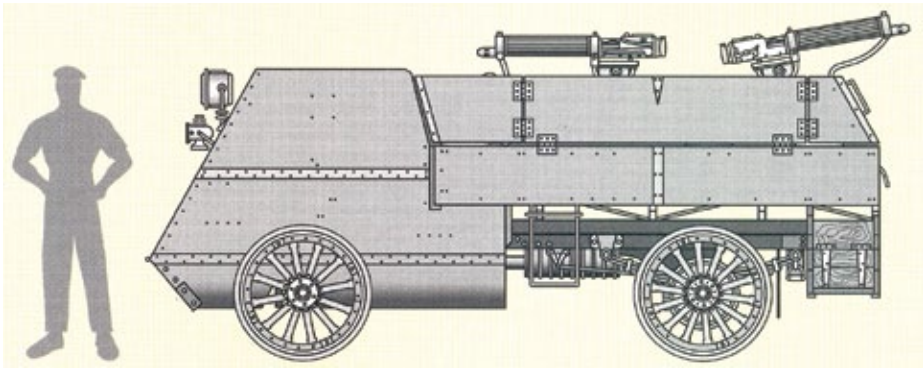
In 1916, he shipped to France and then into the trenches at Kemmel Hill with the Black Watch. It was here on September 15, 1916, during the battle of the Somme, that he saw tanks used for the first time. The idea of a mechanized fighting force was born out of the cavalry regiments of the 1800s and it was from here that many of the volunteers needed to man the tanks came, though not exclusively. Indeed, like the newly formed Air Force, the armoured regiments drew volunteers from right across the forces. But the tanks of the day were massive affairs and prone to break downs. Even so, despite the Canadian and Australian after-action reports both concurring that the tanks were too primitive to be decisive in battle, to Worthington the utility of armoured vehicles was clearly evident.

Shortly after the Somme, he transferred to the Machine Gun Brigade. The Canadian Motor Machine Gun Brigade (CMMGB) was the first unit of its kind and numbered 350 strong. In January of 1917, it was in the line at Vimy Ridge and it was here that Worthington would be awarded his first Military Medal for holding his position during a German advance. Initially alone in a trench, Worthington was soon joined by a soldier named "Quigley" from the 44th Battalion. Worthington had gone forward to check on another section, but when he returned to his own section, he discovered they had been ordered to withdraw. Ironically, Quigley would later receive 28 days field punishment for abandoning his post to come to Worthy's aid. When Worthy heard this, he immediately protested to the soldier's commanding officer demanding that Quigley be cleared of the charges and awarded the Military Medal as well. Evidently his protest fell on deaf ears, as Army records make no mention of this solider having ever received the medal.

A year later, in the spring of 1918, Worthy earned a bar for his Military Medal and a promotion to the rank of Second Lieutenant.

The role of the CMMGB was quickly becoming critical to the war effort. The brigade was based on the Autocar, of the Autocar Company of Ardmore, Pennsylvania, and each was equipped with two Vickers machine-guns, 12,000 rounds of ammunition, a powerful search light for night operations,

and combined firepower with mobility. Nimble, fast and mobile, their battlefield effectiveness had not gone unnoticed or unappreciated. In the spring of 1918, the Germans launched a series of attacks along the Western Front which marked the deepest advances by either side since 1914. Between 24 March and 3 April the "Motors" lost almost half their strength in casualties, mainly because inexperienced commanders were employing them as armoured cars instead of as mobile machine-gun posts. Despite the heavy casualties, their performance and great utility during the March offensive did not go unnoticed, and on 2 June 1918, a second such unit was created. By this point, Worthington was in command of E Battery, 1 CMMGB, and by August he had been promoted to Captain.

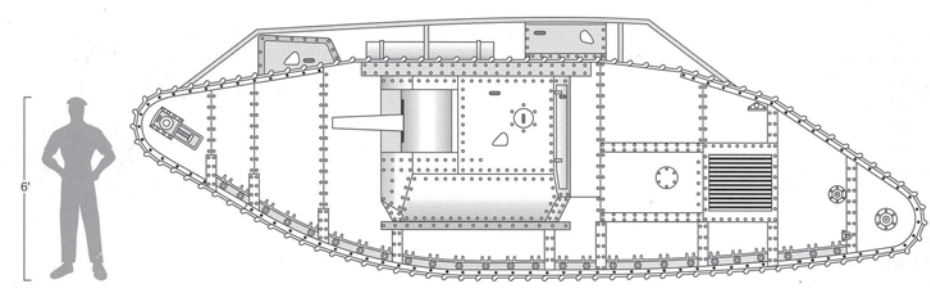


The RCAC: An Illustrated History—Chris Johnson

Figure 2: The Autocar developed in 1914 and employed by the 1st Canadian Motor Machine Gun Brigade (CMMGB)

Worthy's next major exposure to the usefulness of tanks in warfare was on 1 July 1918, during the battle of Amiens. Because of their limited use to this point in the war, the appearance of the "whippet" and the larger Mark V tanks on the battlefield succeeded in creating fear in the German line and helped the Australians win a clear victory over the Germans. Having witnessed their use in the field, Worthy was one of a handful of Canadian and British officers to recognize their potential. Official positions, however, were mixed about the tank's utility. For instance, the official Canadian after action reports stated that the victory at Amiens was not due to the massed use of tanks on the battlefield, while the Australian after action reports concluded that the use of tanks was central to the victory.

This ambivalence toward the tank meant that it wouldn't be until early 1918 that the first version of the Canadian Tank Corps was formed. Equipped with British Mark Vs and French Renault tanks, Canada's first foray into the armoured world could suffer a quick demise with the end of World War I in November and the ultimate disbanding of all armoured units.



The RCAC: An Illustrated History

Figure 3: British Mark V tank

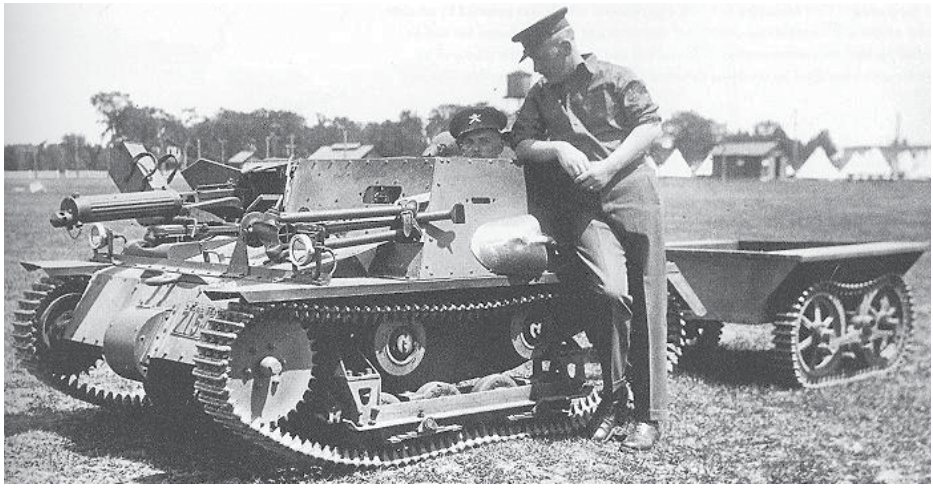
Figure 4: Cap badge of the Canadian Tank Corps, 1918

The postwar period was an opportunity for the Canadian military to reorganize, and to that end, the Otter Committee was formed. As might be imagined, the committee came under intense political pressure from all sides. Central to the Committee's mandate was determining the size and makeup of the army that Canada would need. But the committee had to deal with many side issues driven by special interest groups, such as whether to return to named regiments or continue with numbered battalions. The question of who would perpetuate what battle honours only complicated the issue. One could surmise that tanks represented an emerging technology that few commanders, raised upon infantry-centric warfare, fully appreciated. However, the overriding sentiment of the day was that Canada had just fought the war to end all wars and nobody felt tanks would be required. Since no one lobbied on behalf of wartime tank battalions, the resultant post-war structure did not include tank regiments.
The machine-gunners, on the other hand, were heard and in June of 1919 the Canadian Army formed the Canadian Machine Gun Corps by creating a single permanent force battalion.

In early 1919, when most troops were being demobilized, Worthy accepted an offer to join the Permanent Force Army resulting in a posting to Montreal to reorganize two militia machine gun units. From there, he was posted in 1920 to Ottawa as a Captain and then in 1921 to Rosedale Barracks in Toronto, with summer training being spent at the Canadian Small Arms School at Rockcliffe Ranges in Ottawa, the current site of the RCMP Musical Ride Barracks.

In 1923, only three years after its formation, the Permanent Force Machine Gun Brigade was disbanded and its equipment distributed to the infantry. As a result Captain F.F. Worthington found himself posted to the Princess Patricia's Canadian Light Infantry (PPCLI) at Fort Osborne Barracks in Winnipeg. It was here that he met and in 1924 married Clara Dignum. Clara, known to all as "Larry," bore Frank a son, Peter, in 1927 and a daughter, Robin, in 1929.

By 1930, a mechanized army force was finally established, resulting in the purchase of 12 Carden-Loyd machine gun carriers. These vehicles were intended as infantry support in that they could move machine guns forward quickly over broken ground. These would later be followed by several versions of the Infantry Tank Mark I, nicknamed the Matilda, and the Vickers Mark VI light tank.



The RCAC: An Illustrated History—RCH Museum

Figure 5: Members of the 1st Motor Machine Gun Brigade display the Carden-Loyd carriers at Connaught Ranges in Ottawa June 1933

By 1936, with the threat of another European war looming, the idea of a Tank Corps for the Canadian Army was revived. Canadian armoured doctrine was still very much based upon what the British were developing. Recognizing the need for a tank school, Captain Worthington was chosen to assume the post of Commandant of the Canadian Armoured Fighting Vehicle School on 1 November 1938. As commandant of the new school, he oversaw a complement of seven officers and 12 non-commissioned officers (NCOs); 12 machine gun carriers, but no tanks. Engines were acquired from numerous sources for maintenance practice. Worthy, now gazetted to Acting Major, was posted to Bovington Army Camp in England to learn more about tanks.

The Canadian Tank School's stay in London was short-lived due to a shortage of adequate training space. Relocating to Camp Borden on 1 May 1938, it was renamed the Canadian Armoured Fighting Vehicle School. Worthy's posting was also changed to Camp Borden.

With the outbreak of World War II, the school became an important training centre for Canada's emerging Armoured Corps. The school went through several name changes, including the Canadian Armoured Fighting Vehicles Training Centre (CAFVTC), before finally settling on A33 Canadian Armoured Corps Training Establishment (CACTE).

Thanks to Worthington's determination, Canada acquired its first tanks in 1938: two Vickers Light Tanks. Ten more followed the next year. In 1940, the Canadian Armoured Corps was formally established (the Royal prefix was granted in 1945) when Ottawa issued General Order 250 on 13 August. The Corps was to consist of a headquarters and such other formations and units which may later be authorized.

In addition to commanding 1 Armoured Brigade and the Centre, Worthy was appointed "Officer Administering, The Canadian Armoured Corps," with "duties as laid down by the Adjutant-General." In effect, he was given broad authority to function as the *de facto* commander of the Corps with

responsibilities for organizational matters and training standards affecting the Corps as a whole. His right to advise the staff branches in Ottawa on armoured issues, including equipment was clearly acknowledged. To the Regiments, and to individual members of the Corps, Worthy was recognized ever after as the "Father of the Corps."[1]

As its first senior officer, Colonel Worthington bought 265 of the U.S.-built versions of the First World War vintage Renault Tanks, the M1917 Light Tank, for use in training. Because U.S. neutrality laws prohibited the sale of weapons to Canada, these antiques were bought for $120 each as "scrap metal" from the Rock Island Arsenal by the "Camp Borden Iron Foundry."

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Figure 6: 1964-08-08, Members of the Royal Canadian Armoured Corps at Camp Borden, Ont. are holding their Corps weekend and will also commemorate the 50th Anniversary of the outbreak of the First World War. MGen F.F. Worthington Honorary Colonel Commandant of the Corps and his First World War driver "Pop" Saunders look over bullet holes in the armoured fighting vehicle they used

Some may question the logic in using World War I era tanks for training, but as Jack Wallace notes in *Dragons of Steel*:

> *There was no question about the value of these relics. . . . Drivers learned something of the problems of handling armoured vehicles; they and the mechanics received more than ample time to carry out maintenance and repair; officer and non-commissioned officers, despite the lack of internal communication, by using flag or hand signals between tanks, were able to practice minor tactics and formations training. For those of us in Camp Borden at the time, it was an exciting experience.*[2]

A more pragmatic view was expressed by the RSM of the 8th Hussars, WO1 George Lawrence:

> *At least they were good for laughs. They were low-slung things with a sort of pillbox cap for the men. They had no suspension and when you'd go over a log, say, and come down, you'd hit with a whack that was enough to knock your teeth loose. There really wasn't room for two men but we'd cram two in. You needed the extra man; the things kept catching fire and you'd have to have a bucket of water or sand handy to put it out. They could go 8 or 10 miles an hour, but they seldom got very far. They'd break down and you'd fix them up and they'd break down again.*[3]

Another significant development in August 1940 was the formation of an inter-departmental Tank Committee in Ottawa. In light of the growing realization that Britain did not have the capacity to supply tanks for the armoured formations being sent overseas, the committee was to serve as a centralized government authority to coordinate specification and design parameters, as well as oversee production. Colonel E.L.M. Burns was named as the first chairman and Worthy was named as one of the original members.

The armoured corps school, however, was getting off to a rocky start. In early 1940, National Defence Headquarters (NDHQ) ordered the school to close and convert to infantry training. Worthy saw this as a big mistake, and did not disband the tactics, wireless, and gunnery training sections of the school, something NDHQ did not notice for a long time. The ill-advised decision to terminate armoured training was reversed on 13 August 1940, with the official formation of the Canadian Armoured Corps, whereby former cavalry units were converted to armour. Two additional schools were also established at Camp Borden; A27 Canadian Armoured Corps Training Centre (CACTC) and A28 CACTC, although A27 CACTC would, in January 1942, be moved to Camp Dundurn in Saskatchewan.

Throughout 1942, because of the rapid enlargement of the Corps' training needs, the facilities and structure of the Centre in Borden was continually adapting to cope with both the greatly enlarged course loads and the technical changes brought about by new equipment. Range facilities were constructed for the Armoured School, but they proved inadequate due to other concurrent training demands. As a result, the Meaford Armoured Fighting Vehicle Range, known locally as the Meaford Tank Range, opened in 1942 on 17,500 acres of land on the shores of Georgian Bay.

From 1940 to 1942, Worthy, now a Brigadier-General, was posted to England to command the 1st Army Tank Brigade. In March 1942, now a Major-General, he was posted to Camp Debert in Nova Scotia to command the 4th Armoured Division. By August 1942, Worthy and the 4th Armoured Division were sent to England, where he soon became a constant annoyance to his superiors and Canadian military headquarters due to his unconventional, but often successful, methods of doing his job. Worthy was not a man to go by the book.

In early 1944, Worthy was forced to relinquish command of the 4th Armoured Division, "officially" due to poor health, but in fact it was due to changes in the appointments of Canada's Army commanders. Worthy supported Lieutenant-General Andrew McNaughton, but it was Lieutenant-General Guy Simonds who was given command of II Canadian Corps. Worthy was simply edged out in favour of others. It was the biggest regret of his career that he never commanded a division in war. Ironically, years later Worthy and Guy Simonds met at a Christmas dinner and Simonds admitted that he had made a mistake taking Worthy's command away from him.

In 1944 he returned to Canada to administer Camp Borden, where replacements were being trained for the Canadian Armoured Corps and Infantry, as well as the Royal Canadian Army Service Corps and the Canadian Provost Corps. Worthy soon discovered that other things had changed since he left in 1942. Black-marketing was out of control, with fuel, food and building materials being the hot items. Worthy as usual, had an unconventional method of stopping the stolen items from leaving the camp. He posted Provost Marshals at the gates to search vehicles leaving, forcing the thieves to take the back roads and trails to get out of camp. He then had the engineers dig trenches to make it impossible for vehicles to get through.

But his most unconventional tactic was having the engineers lay landmines on the back trails, with the trigger points set back about 50 yards. This, at least, sent the message while ensuring that no one would actually get hurt. The message got through loud and clear since no one wanted to take any chances with a commander who mined roadways.

The National Resources Mobilization Act (NRMA) of 1940 made military service compulsory for in-country service, but overseas service remained voluntary. Those who still refused to go active service met with Worthy's unconventional methods of training and persuasion, including being virtual targets of live-fire exercises and being forced to work so hard around the camp that they "volunteered" since it was the lesser of the evils.

In March 1945, Worthington moved to the west coast and from 1 April 1945 to 26 January 1946 served as General Officer Commander-in-Chief of Pacific Command, a command established to strengthen and administer home defence facilities on Canada's Pacific Coast against possible Japanese attack.

The world was fast changing. The end of the Second World War with the use of Nuclear weapons marked a change in the nature of war. But Major-General Worthington, not to be out done, kept up. When, at age 59, he retired from the Canadian Army in 1948 he became special advisor to the Minister of National Defence on civilian defence planning and coordinator of that defence organization. In the summer 1960 issue of the Canadian Army Journal, Worthy penned a detailed article entitled "Pattern for Survival" in which he lays out the principles for Civil Defence Planning in the event of a nuclear war and discusses the roles and responsibilities of each government department. In typical Worthington style he concludes, "Emergency planning has been integrated within the federal government structure, although some departments need prodding. . . . As the programme progresses there must be evolutionary changes, but compared with the past Civil Defence programme, the present one is dynamic and should achieve its purpose."

Worthy's greatest post-active service retirement task, however, came when he was appointed the first Honorary Colonel Commandant of The Royal Canadian Armoured Corps (RCAC) (the term Honorary was dropped in 1964). There could, of course, have been no other choice for the prestigious position, and Worthy held it until the end of his life. While the Colonel Commandant's position was intended to be mainly ceremonial in nature—looking after Corps Traditions and morale—it came to be one of the truly important factors linking the far-flung regiments across the country, and one with considerable clout in Ottawa when protecting the Corps' broader interests.[4]

In October 1952, Worthy donated the Worthington Trophy to the Corps. A silver model of a Centurion tank, the trophy was to be presented annually to the Militia unit acquiring the greatest number of RCAC (association) trophies.

Figure 7: The Worthington Trophy donated to the Armoured Corps in 1952

Throughout his long tenure as Colonel Commandant of the Corps, Worthy was always present at the Officer Cadet graduation ceremonies on Corps Weekend at the School in Camp Borden. For many years he reviewed the mounted parade in the First World War Autocar which he had commanded in the Motor Machine Gun Brigade in 1918. His driver from that conflict, "Pop" Saunders, was always in the driver's seat.

Canadian Forces Joint Imagery Centre Z-10381-2 CD 457 IMG 0003

Figure 8: 1964-08-08, MGen F.F. Worthington, Honorary Colonel Commandant of the Royal Canadian Armoured Corps, takes the salute from officer cadets at the RCAC School Camp Borden, ON

Worthy died on 8 December 1967 at Ottawa's Military Hospital. Because he had been a vocal supporter of the changes that the Minister of National Defence, Paul Hellyer, was implementing under unification the Minister responded by approving Worthy's request (which typically was contrary to regulations) to be buried at Worthington Park in Camp Borden, where he would continue to be surrounded by his beloved Corps. After his funeral in Ottawa, Worthy's body was flown by a Royal Canadian Air Force (RCAF) Caribou aircraft to Camp Borden, and in accordance with his wishes, four Centurion tanks fired a 13-gun salute and three RCAF Chipmunk aircraft did a low-level "fly-past" in tribute to a great soldier and Canadian.

Although he obtained his wish, it was tinged with irony. Within three years the Corps School was moved to Canadian Forces Base (CFB) Gagetown, New Brunswick, and soon, except for dedicated personnel of the Corps Museum and the occasional staff officer posted in to what was now CFB Borden, the Corps' presence in what had been its spiritual home was practically non-existent.

Today Worthington Park remains a strong reminder of the birthplace of the Royal Canadian Armoured Corps and a tribute to its father, Frederic Franklin "Fighting Frank" "Worthy" Worthington, and the home to the tank collection of Base Borden Military Museum.

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ENDNOTES

1 John Marteinson and Michael R. McNorgan, *The Royal Canadian Armoured Corps: An Illustrated History* (Toronto: Robin Brass Studio, 2000), 86.

2 John Wallace, *Dragons of Steel: Canadian Armour in Two World Wars* (Burnstown, Ontario: General Store Publishing House, 1995), as quoted in John Marteinson and Michael R. McNorgan, *The Royal Canadian Armoured Corps: An Illustrated History* (Toronto: Robin Brass Studio, 2000), 86.

3 Marteinson and McNorgan, 87.

4 *Ibid.*, 340.

Source: Combat Camera

Source: Combat Camera

THE OPERATIONAL ART—DEFINITIONS AND INTERPRETATIONS: DOES SIZE MATTER?

Lieutenant-Colonel (Retired) R. Jarymowycz OMM, CD, PhD

Armies were like plants, immobile, firm-rooted, nourished through long stems to the head.

—T.E. Lawrence, Seven Pillars of Wisdom[1]

Operational art along with *operational design* has become a fashion statement in the current Canadian Army.

Patience will see it drift back into insouciant martial parlance like *warfighting*—if we tactfully put it in context. In our evolution through the first decade of the new millennium, we still dabble in sycophantic doctrine and seek *Empire* solutions to defining ourselves and our *philosophie militaire*. This is unfortunate for it was made readily apparent by November 1918—a momentous period that contains precious nuggets of doctrinal and philosophical worth waiting to be panned by academic prospectors. These should ideally be *military* historians with some sort of combat arms education.

The operational art became a possible requisite during the Industrial Revolution and a practical military requirement via Ulysses S. Grant's example circa 1864–1865. It was refined by Bolshevik thinkers (Aleksandr Svechin) and only recently "rediscovered" via Soviet writings and American evolutionary doctrine, like *AirLand Battle*.[2] It has been enthusiastically mimicked by us since we began service in Empire armies defending the West's frontiers. Our Danube flows through the valleys of the Kush. Our Marcus Aurelius has many faces, and one or two dopplegänging hopefuls. All of the current uncertainty originates in definition and comprehension. Terms like *operational design* are deceptively *cultural* interpretations disguised as a universal solvent. This alchemy comprises a *planning methodology* based on the controversial method of *systemic operational design* (SOD). Canadian Staff College students should note its current evolutionary status at the Leavenworth doctrinal smithy.

Operational art (*op art*), I now believe has two levels. The first includes a broad-spectrum description of what *tactical captains*[3] do at levels above division and perhaps below. The term is often used by historians and others in casual or para-military reference. It can, given careful creative definition, be applied to most millennium actions. Many military modernists covet association with the idiom and wish to be recognized as practitioners. It is best a literary term and should be allowed a certain freedom. It will be extensively used by civilian and military writers, few of them illuminati.

Secondly and professionally, *operational art* is what was practiced by Grant and includes a taxonomy of terms and prescripts. It is properly found only at the theatre and army group level and practiced by fellows who can *invent*, then actually *order* complementary, systematic operations that feature combined/joint efforts, plus the latest cornucopia of holistic addendums. It is this stratum that invites redefinition by lesser powers and produces attempts to funk the orthodox meaning.

There can be but one operational artist and only that individual practices operational art.

The extended staff does not; lesser commanders do not. This will be challenged of course, but it is mostly military *Kulturkampf*—a battle of definitions. The key aspect of op art is creative planning and the direction of bold ideas—these are directly (or should be) in reaction to political instruction and thereby affect strategy. Having said that, it may be noted that while the commander may be the only *artist*, his acolytes need to be competent artisans; Doctor Shimon Naveh (the noted SOD promoter) advances the metaphor of *sponsors* (strategists) guiding *architects* and *engineers*.

The common factors of *op art* include a *strategic goal* and *single theatre control*: command of strategic intelligence; *simultaneous* combined/joint ops campaigns; plus Olympian logistics supplemented with multinational and political aspects. Results affect higher strategic direction and require creative, artistic application of professional and para professional resources. It should be appreciated that tactical commanders need not think in the same terms that a theatre commander does. Resources, responsibilities, freedom of action and relationships with strategic and political leaders are not the same.

Simultaneous campaigns that don't directly influence each other particularly call for some type of artistic faculty by those in charge. Theatres of operations and theatres of war both require operational artistry. One benchmark question regarding aspects of *op art* is voiced by folks with considerable combat experience, who tend to be wary of dogma, doctrine and breezy references to *art*: "Can this be done under a tarpaulin with map and red-filtered flashlight as the rain beats down? As the mosquitoes and ticks join in? After two or three sleepless nights?"[4]

Clausewitz's reference to the *Dreifaltigkeit* (including "primordial violence; chance and probability, within which the creative spirit is free to roam") has become far more important to our interpretation of the operational art with the Canadian Afghanistan campaign—although we are content not to look much beyond the familiar maxim that of "War is a continuation of politics." The senior Canadian staff officer professionally familiar with both Clausewitz and Jomini should vigilantly review the former's strategic direction versus the latter's more prescriptive bent.[5] Naval proponents of the operational art will have to mêlée with Corbett and Mahan before deciding if there are pertinent Canadian examples that demand study. The Air Force will have to content itself with Douhet, Hiroshima as well as the Operations LINEBACKER and Serbia '99 for discussion of air force dogma within or via op art.[6]

Some Canadian definitions of *op art* may be accused of foxing proper delineation and crafting rococo interpretations. This is unkind, but not altogether untrue. Our decision to discover the practice of *op art* in Afghanistan (Operation MEDUSA, for example) is based on a redefinition of the term to conform to the reality of millennium warfare within the cybernetic revolution. War has now even more facets. *Operational design* is being stretched on a holistic rack with the same ecclesiastic resolve that excised the Templars and made the Medieval Ages so much fun.[7]

Our avant-garde definitions originate from a perceived need that Clausewitz might approve—for they must serve the two senior members of the Summersian holy trinity.[8] We must contend with the operational reality of a commander who is not in charge of a theatre or army group, yet must coordinate many of the critical aspects within *op art* (including multinational addendums) that have become common and required. This includes international liaison at interesting strata.

The situation is made more difficult because of the control of various headquarters that may include wary internationalists concerned with "mission creep" and thwart creative operations and tactics in a way Grant or Moltke did not have to contend with. There are also cabinet impediments to *op art* in the best Clausewitzian tradition. In a familiar example, General David Petraeus was constrained until finally *directed* by his political chiefs to effect his particular solutions in Iraq.[9] It is moot whether *The Surge* is a lasting solution; it is an example of the operational art.

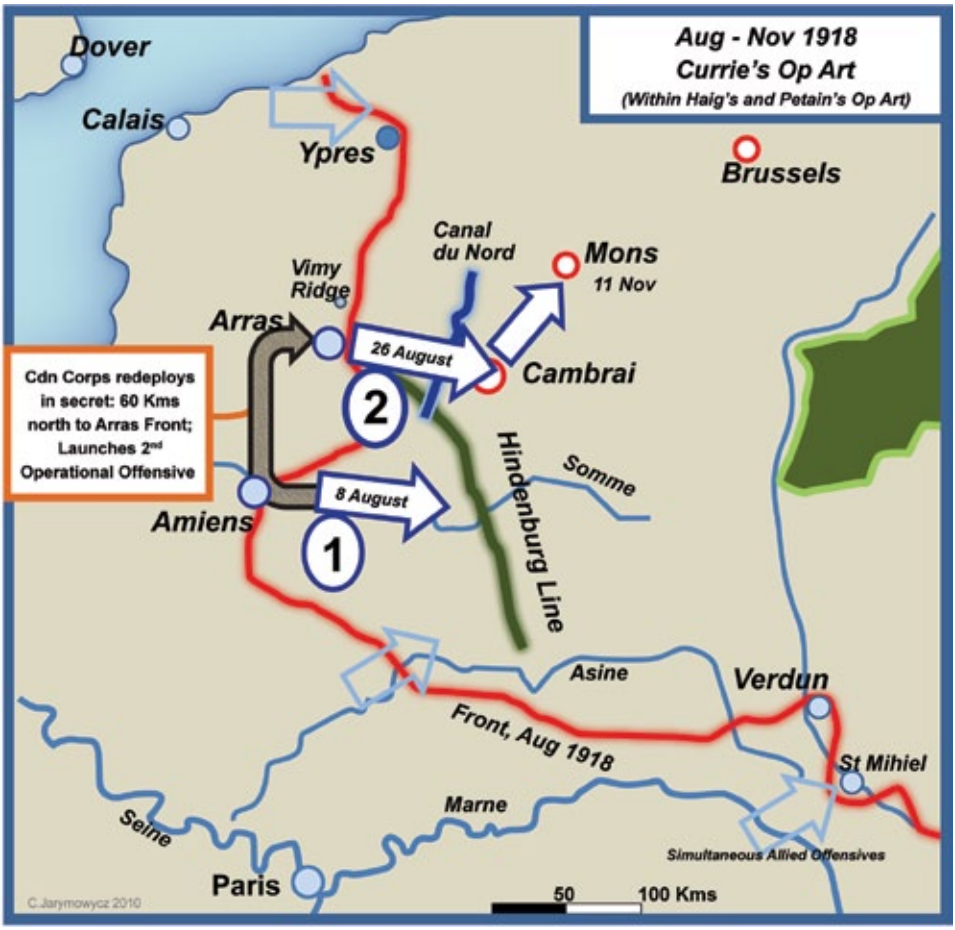
Canadians are uneasy with the term, particularly when it comes to national historical examples. One Canadian Forces College student, a cavalry officer and veteran of Afghanistan, suggested in a liberal, non-Freudian reinterpretation of *op art*, that "Size does not matter." Perhaps.

Staff officers continue to debate whether or not Generals Currie, Crerar or Simonds practiced the operational art. This is again based on definition. The short version, which I tender in the strictest of orthodox (Ulysses S. Grant) terms, is that Currie did, Crerar did not, and Simonds was an innovative practitioner who dabbled on the cusp. I do not mean to belittle this. *Cusp commanders* deserve study and credit along with the operational artist: "They carry out design and create new opportunities or liabilities." Consider Sharon's crossing of the Suez Canal concurrent to his "Chinese Farm" battle; his subsequent penetration into Egyptian western depth which shaped the Israel Defense Forces' 1973 campaign; or, Nelson's bold action at Cape St Vincent.[10]

Perhaps a few brief examples from *The Great War* will help:

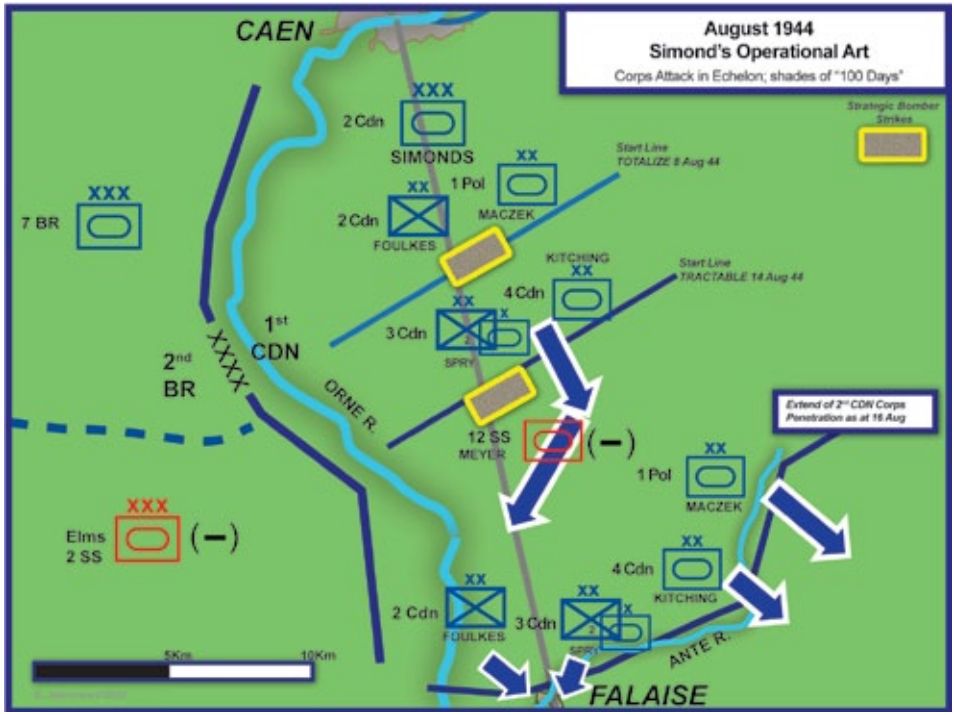
- In 1914 Joffre practices the operational art when he selectively abducts divisions from engaged French armies, creates a new army south of Paris, intuitively expecting von Kluck and von Bülow: voila, French *fingerspitzengefühl*. He then launches the Battle of the Marne with the nouveau 6th Armée in concert with the British Expeditionary Force, and saves France.

- In 1918 his successor Marshal Foch ("Tout le monde à la bataille") announces that the War's *strategic* goals ("The ritual of which Foch was priest")[11] include recovery of northern coal fields as well as the elimination of five salients left over from the *Kaiserschlacht*. His orders to Marshal Haig are to do something about the Amiens salient and drive north. Haig's *op art* is to move Lieutenant-General Arthur Currie's Canadian Corps, pair it with Lieutenant General John Monash's Australian Corps and produce *the Black Day of the German Army* (8–27 Aug 1918).[12]



- Currie's *op art* (and I intend to stretch it this far) is to recommend an *operational pause:* halting the current operation; this both rests the corps and recovers *operational surprise*. Currie then determinedly proposes to be trained back north to Arras (approximately 65 km) and convinces his boss to let him attack the hinge of the *Hindenburg Line*. This begins phase two of *The Hundred Days* (28 Sep–11 Nov 1918) and comprises battles that include the brilliant crossing of the Canal du Nord, Bourlon Wood, Cambrai and, *enfin*, Mons and the armistice.

In conclusion, I suggest that while different groups participate in *operational design* ("the commander's business" to quote Richard Swain)[13] at various levels of sophistication, only *the Boss* actually practices *operational art*. The stratum at which the Boss operates is usually at the theatre level. Field Marshal Montgomery practiced operational art, but like all art, op art can also accommodate bad artists.[14] The question of size can be examined to reflect variations with respect to *geography* and *mission*: Slim practiced it, von Lettow-Vorbeck practiced it and so did Lawrence of Arabia.



Operational art must not be confused with general tactics, including those at corps, division and brigade. Having said that, the decision whether armies *other* than American practice the operational art today is a matter of interpretation. FM 100-5, in its 1982 iteration dogmatized that op art was "an identifiable activity" and in '86 opined that there existed certain fundamental *concepts of operational design*, which included *center of gravity, lines of operation* and *culmination*. All were adopted into American doctrine and soon influenced, perhaps out of proportion to our cultural requirements, our own staff colleges' *experimentation* with neo Clauswitzian and worse, Sun Tzuesque philosophy. Alas, this crams Svechin into our *iPhone*s as just another operational *app*.

A very Canadian reaction to minor commanders and creative staffs vis-à-vis operational art may perhaps be "vive la difference." Staff work at theatre level may not be *art* but it differs greatly from what lower level staffs do, and its effectiveness matters critically. Supporting theatre movements and logistics, collecting and interpreting intelligence at theatre level, communicating, coordinating with civil authorities and integrating military action with actions of civilian agencies are all qualitatively different from what *tactical staffs* do.[15] Historical examples may include Moltke's railway wizards, the naval staffs of OVERLORD and the operational specialization demonstrated by logistics organizers in both DESERT STORMS.

Canadian variations can be accommodated, although reaction at Leavenworth and Carlisle may be more polite than enthusiastic approval.[16] It is immaterial and simply something a modern senior officer must be able to discuss intelligently, calmly and offer appropriate examples while carefully steering away from the minefield of what is *military creative thought*. This includes the uncertainty whether the operational planning process (OPP—a type of *operational design*) is a boon or a cultural imposition; or if Canadian doctrine is predestined to be a pastiche of alien interpretations . . . . But that is another story altogether.

ENDNOTES

1 T.E. Lawrence, *Seven Pillars of Wisdom* (London: Publisher, 1926), Book III, Chapter 33.

2 One of the distinguished operational doctrines—a sophisticated follow-on of *Blitzkrieg* and *Ghlibokii Boi*. Created by General Donn Starry and a team of doctrinal illuminati including Generals Wass de Czege, Holder and Richardson circa 1980–1986. Also: A.A. Svechin, *Strategy* (Moscow: Publisher, 1937) and various reprints.

3 My initial historic example includes Alexander the Great through to Napoleon: *Great Captains* who although establishing strategic and operational direction, also commanded armies personally—exercising *tactical* manoeuvres and control.

4 Lt Gen L.D. Holder, correspondence 10 June 09.

5 Jomini is considered the more *modern* by some: the introduction of current terms like "decisive points" and "lines of operation and support." Jomini originated the idea of "combinations"—important today via the amalgamation of diplomatic, economic and military efforts. *Combinations* enable review of cumulative military effects (air and land campaigns).

6 Many Naval op art aficionados prefer to use Nelson as a model worthy of study; also, Cunningham in the Mediterranean, Yamato and King/Halsey.

7 This is currently found in methodologies and pedagogical approaches such as *systemic operational design* (SOD). Volatile terms such as "maintaining cognitive initiative" are used. Military teachers can immediately identify the latent danger. See various writings by chief proponent, Dr Brigadier Shimon Naveh (formerly Israel Defense Forces) as well as articles and books by BGen Huba Wass de Czege (for example, "Renewing the Core of Operational Art").

8 This would emphasize Summer's definition of *wunderliche Dreifaltigkeit* (as *government, army and people*) which is considered an *American interpretation*; the stricter (more accepted) Germanic translations of Clausewitz's paragraphs cite: "composed of primordial violence, hatred, and enmity, which are to be regarded as a blind natural force; of the play of chance and probability within which the creative spirit is free to roam; and of its element of subordination, as an instrument of policy, which makes it subject to reason. . . ." (Bassford). See: Carl von Clausewitz, *On War*, trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976/1984), p. 89; for conflicting comparison see the US Army interpretation by Col Harry G. Summers, Jr., *On Strategy: A Critical Analysis of the Vietnam War* (Location: Presidio Press, 1982) and *On Strategy II: A Critical Analysis of the Gulf War* (Location: Dell, 1992); for balance, see Chris Bassford, *Clausewitz in English* (Location: Oxford University Press, 1994).

9 In January 2007, President Bush directed that Gen Petraeus would succeed Gen George Casey as commanding general of Multi-National Force-Iraq and command all US troops in Iraq; he subsequently approved "the Surge." General Petraeus, as United States Central Command (CENTCOM) commander (2008) continued to practice op art—as did his theatre commanders, Generals Odierno and McChrystal. Correspondence and discussion with Generals David Fraser, L.D. Holder, Huba Wass de Czege, P.K. van Riper (United States Marine Corps), Walter Natynczyk and Tim Grant circa 2008–2009.

10 Lt Gen L.D. Holder, correspondence, 5 Sept 09.

11 T.E. Lawrence, 194.

12 Canadians within Haig's Army Group were part of Gen Rawlinson's British 4th Army: the Canadian Corps, the Australian Corps and the British III Corps.

13 See: TRADOC Pamphlet 525-5-500 "Commander's Appreciation—Campaign Planning" 28 Jan 2008; BGen Huba Wass de Czege, "Systemic Operational Design: Learning and Adapting in Complex Missions," *Military Review* (Jan–Feb 2009); and Richard M. Swain, "Commander's Business—Learning to practice operational design," *JFQ* 53 (2009). See also, Shimon Naveh, "Operational Art and the IDF: A Critical Study of a Command Culture" (Washington, DC: Center for Strategic and Budgetary Assessment, 2007) and, for balance, Milan N. Vego, "A case against systemic operational design," *JFQ* (April 2009).

14 JP 5-0, *Joint Operation Planning* (Washington: US Army, 2006). "Design is what commanders do before formulating their commander's guidance and statement of intent that initiate formal planning." p. III-59. Design has been described also as "a method of problem solving that utilizes learning and rigorous dialectic." Swain, *op cit*., p. 62.

15 "Perhaps *excellence at the operational level* is a better name for this." Holder, *op cit*.

16 Correspondence, Generals Donn Starry, L.D. Holder, H. Wass de Czege and D.A. Fastabend. Special thanks to Lieutenant General Don Holder, a bona fide military *philosophe* and trainer of armies who kindly agreed to read this paper and offer valuable comment.

Source: Combat Camera

U.N Sentry Box—Greek Line

Peter Roman Alexander Spuzak
CWM 96-07816
Beaverbrook Collection of War Art

PEACEKEEPING IN CYPRUS

Like all Mediterranean countries, the history of Cyprus is long and eventful. For more than 340 years, it was part of the Ottoman Empire. Following the First World War however, it was annexed by Britain and up until the late 1950s remained under their control. In 1959, representatives of the British, Greek and Turkish governments, met and agreed on a constitution for an independent Cyprus. The agreement was ratified by the island's indigenous Greek and Turkish population and on 16 August 1960, the Independent Republic of Cyprus came into existence.

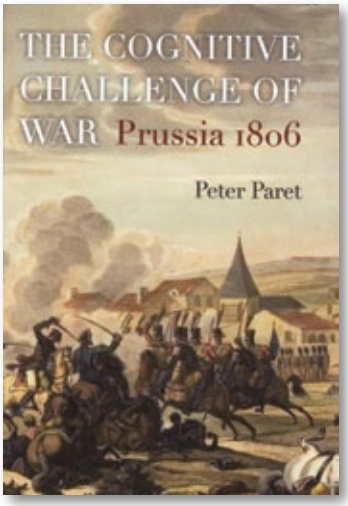
It was hoped that the Republic of Cyprus would be a multi-ethnic state that would reflect and protect the needs and rights of its Greek and Turkish communities. But it was not to be. In 1963 the Greek Cypriot President, Archbishop Makarios, proposed thirteen constitutional changes that would effectively reduce the political power of the Turkish Cypriot community and its political leaders. While Turkish Cypriots initially did not respond to the proposal, Turkey rejected the changes out of hand. By December 1963, tensions between the two communities had erupted into violence. Under international pressure, a cease-fire was negotiated with all sides agreeing that the cease-fire line (Green Line) between the areas of the two communities in Nicosia would be patrolled by a "peace-keeping force". But the situation continued to deteriorate.

NATO, in parallel with the United Nations, had been holding a succession of conferences aimed at finding a solution between its two member states. On 4 March 1964, the United Nations Security Council approved Resolution 186, creating the United Nations Peacekeeping Force in Cyprus (UNFICYP), with the mandate to prevent a recurrence of fighting, contribute to the maintenance and restoration of law and order and a return to normal conditions. Canada would be a pivotal member in the success of that force. The first troops to join the British forces on the island were Canadian, but it wasn't until 8 June 1964, that UNFICYP reached the full strength of 6,411 augmented by civilian police from Australia, Austria, Denmark, New Zealand, and Sweden.

For ten years the situation remained more or less stable, but tensions continued to rise and on 15 July 1974 the Greek-officered Cypriot National Guard mounted a coup d'ětat. Five days later Turkish troops landed on the north coast of the island and fighting ensued. A ceasefire was arranged and took effect at 1600 hours, 22 July. But fighting resumed the next morning and was especially intense around the Nicosia airport where British and Canadian troops were located. In the end, UNFICYP forces managed to convince both sides to declare the airport a UN-protected area. On 16 August, following failed peace talks, the Turks forces declared a ceasefire and UNFICYP quickly delineated the disengagement zones between the opposing forces and took over responsibility for their security. With the fighting over, UNFICYP's major task became the maintenance of peace between the two sides until a permanent political solution could be found.

After the 1974 Turkish intervention the peak strength of Canada's UNFICYP contingent was 950. This was gradually reduced to 515 in early 1987, but fell to 520 by early December 1992. By then, however, Canada was one of several nations questioning the utility of keeping forces in Cyprus, especially as neither Greek nor Turkish Cypriots had made any genuine effort to resolve their problems and on 11 December 1992, announced that it would be withdrawing its battalion. By June 1993, there were only 117 Canadians left and today there is only one Canadian serving in UNFICYP headquarters. It has been estimated that over the past 46 years more than 33,000 Canadians have served on the island, twenty-eight of whom died there.

This painting, entitled U.N. Sentry Box—Greek Line, was painted during the month of September 1970 by Mr. Peter Spuzak and depicts a UN guard post along the Greek side of the Green Line.



THE COGNITIVE CHALLENGE OF WAR: PRUSSIA 1806

BIBLIOGRAPHICAL INFORMATION:

PARET, Peter. Princeton: Princeton University Press, 2009, hardcover, 164 pages, $26.50, ISBN: 978-0691135816

Reviewed by Major Andrew B. Godefroy, CD, PhD, pIsc

Understanding how armies change in times of war has become an increasingly important subject of study in recent years, especially given the current operational environment where militaries engage in a near endless cycle of "transformation." By employing a critical period in the development of a well-known strategic thinker as the case for this investigation, Peter Paret's recent book, *The Cognitive Challenge of War: Prussia 1806*, is a refreshingly new approach to the study of military innovation.

Peter Paret is already well known to students of strategy, having edited the seminal work, *Makers of Modern Strategy*. He is perhaps equally well known for his several studies of the famous military thinker, Carl von Clausewitz, and this latest work adds yet another facet to the study of one of the most well-known and popularized thinkers in the modern western world.

Paret's latest work examines the catalyst of war and how the successful French campaign against the Prussian Army in 1806 ultimately led to widespread military innovation including Clausewitz putting pen to paper. Paret's essay on the subject is relatively brief—at only 160 pages, he only manages to scratch the surface on several important topics. Still, the strength of the book lies in the various forms Paret chooses to employ. Seldom in the past have authors explained how art, newspapers or public expressions influenced wide-scale military innovation. As well, Paret clearly demonstrates how Prussian resistance to military change serves to retard their understanding of why Napoleon's forces were able to beat them, and how this bias affects subsequent force development within Prussian forces leading up to the end of the Napoleonic campaigns.

At the centre of the book, however, remain the various factors that shaped the thinking of a young Prussian officer and his subsequent writings. What the reader realizes is that Clausewitz was a remarkably common officer who was shaped by the context of the period in which he lived and who did something extraordinary. The story is likely to give any soldier pause to wonder if he or she too could find himself or herself in a similar context.

Paret's *Cognitive Challenge of War: Prussia 1806* is a commendable and interesting little book that is worth the time invested to consume it. More importantly, it may inspire others to pursue similar studies, or better still, put pen to paper and describe a way of warfare of their own. Finely crafted and a solid addition to any military bookshelf, Peter Paret has delivered a fine essay worthy of attention by a wide audience.

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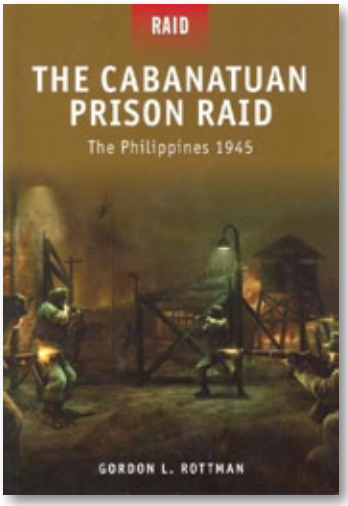


THE CABANATUAN PRISON RAID: THE PHILIPPINES 1945

BIBLIOGRAPHICAL INFORMATION:

ROTTMAN, Gordon L. Oxford: Osprey Publishing, 2009, paperback, 64 pages, $22.00, ISBN: 978-1-84603-399-5

Reviewed by Sergeant Kurt Grant, CD

At 1400 hrs on the afternoon of 27 January 1945, months of preparation and training were put into motion when trucks filled with the scout elements of a large raiding party left Sixth Army Headquarters in the Philippines. As the trucks began their 80-mile trip, they set into motion what has become known as one of the best planned and executed raids in US Ranger history.

It is a remarkable story well worthy of being told, and the author, Gordon Rottman, does an exceptional job of it. In what is likely his best work for Osprey, Rottman details the raid on the Japanese Cabanatuan Prison to rescue more than 500 American, British and Dutch prisoners, all survivors of the Bataan Death March.

Statistically, the raid is impressive: 522 prisoners (including 1 Canadian) were liberated; 225 Japanese in the camp killed; a battalion (1,200 men) outside the camp decimated; 2 friendlies killed and 7 wounded, all in a period of less than twenty minutes. But that doesn't tell the whole story. Indeed, Rottman devotes two thirds of the book to meticulously describing the key elements of the plan. Like a good set of orders, he begins with an overview of the situation in the Philippines and follows it with descriptions of the enemy, the objective and even the terrain and weather. This he follows with chapters on the execution, analysis and conclusion.

Most notably, he discusses the personalities of each of the commanders, and in so doing, one gains a deeper understanding of the complexities of the raid—trust emerging as the key element. The extra detail is a good thing; for to fully understand the magnitude of the accomplishment, the reader needs to have an appreciation of the hurdles that had to be overcome.

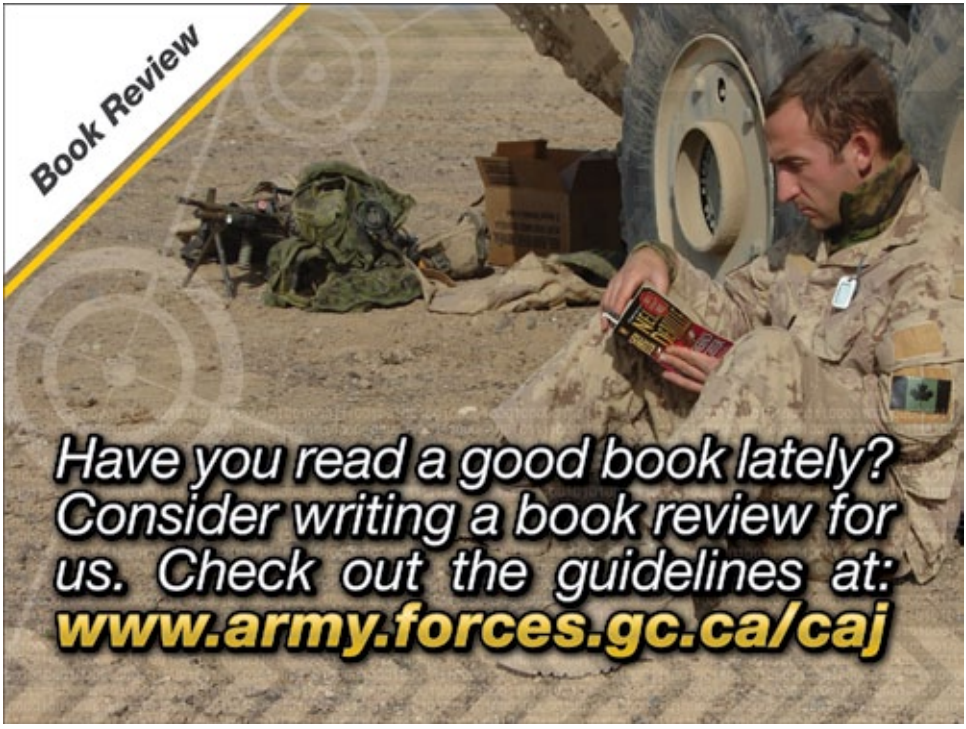
As we see the raid unfold, it becomes clear the gamble that the commander, Lieutenant Colonel Mucci, takes when he relies on the "unknown" Filipino guerrilla force. Under the command of Captain (later promoted Major) Juan Pajota, who coordinated support, this force was responsible for the roadblock at the Cabu River bridge that totally destroyed the Japanese 359th Independent Infantry Battalion. Without the guerrilla's support it is unlikely that the raid would have been as successful or even succeeded at all.

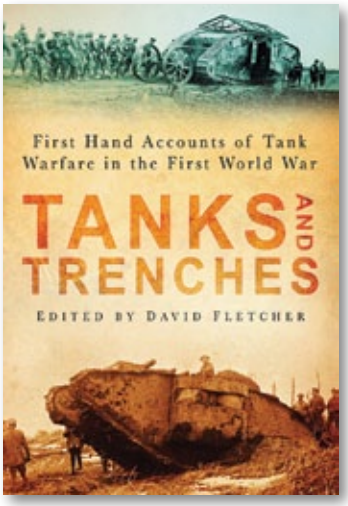
Sidebars include a biography on LCol Henry A. Mucci, descriptions of Ranger weapons, an outline of the leadership of the raid, and a list of radios used. Also included are artwork, detailed maps and photographs taken by the Army photographers who were (if you can believe it) brought along to cover the raid. All add rich detail to an exciting story. Of particular interest is the centre panel showing a bird's-eye view of the prisoner camp with coloured pointers showing critical moments of the raid as it unfolds.

The true value of this book, however, comes in the description of the evolution of the plan. For the Canadian soldier studying tactics, there is much here that is recognizable. The structure of the 6th Ranger Battalion, for instance, is remarkably similar to the Canadian company structure, sharing many of the same elements and organizational layout. The leadership practiced by Mucci is an object lesson in applied leadership principles and flexibility in the face of a changing situation. The evolution of the plan and applied leadership principles make this a good case for the junior leader and junior officer to study.

There is an analysis section that summarizes key elements of the raid and a conclusion that ties everything up in a neat bow. For those interested in further, and more detailed, reading on the raid, there is a bibliography listing titles on the subject. Interestingly, for the movie buff, Rottman includes a paragraph of comments in his conclusion on Hollywood's 2005 take on the mission entitled *The Great Raid*, which is good stuff if you're going to watch the movie.

Overall, *The Cabanatuan Prison Raid* is well written and offers a detailed description of a complex raid and, as such, is highly recommended.





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Edited by FLETCHER, David. Gloucestershire: The History Press, 2009, paperback, 192 pages, $31.28, ISBN: 978-0752449364

Reviewed by Major Andrew B. Godefroy, CD, PhD, pIsc

Among the many innovations emerging from the First World War, perhaps none had greater implications for modern land warfare than the introduction of the tank. Initially noisy, dangerous and lumbering machines capable of speeds no faster than a man walking, these ugly, riveted, gun-sporting "land ships" soon earned a place in history for their direct contribution to breaking the deadlock of warfare on the western front.

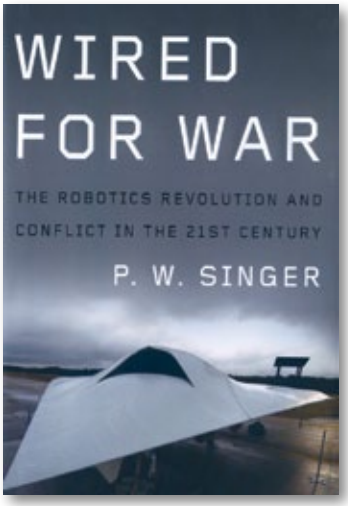
First published in 1994, David Fletcher's edited series of accounts on the earliest days of British tank warfare, *Tanks and Trenches*, has reappeared in a new and updated edition. The first thing that captures the reader is the book's layout and presentation. History Press has done a first-rate job to deliver a clean and image-rich publication that was as pleasing to simply browse as it was to read. There are detailed photos of equipment on nearly every page, and each aerial photo of the battlefield accompanying the text receives a full-blow double page layout on the overleaf. Seldom do authors or publishers give this much attention to the visual aspects of a historical work, and their efforts are to be commended.

Fletcher presents nearly 200 pages of first-hand accounts of British armoured warfare in nine chapters, drawn from the original *Tank Corps Journal* as well as other previously unpublished sources in the Tank Museum Library. The letters have been preserved as much as possible in their original state, and Fletcher does a good job at weeding out the superfluous portions and errors of the accounts without damaging their essence and nuance. He has standardized many items like dates and ranks, but was apt to leave things like alternate names for tanks—such as "car," "bus" or even "willie"—alone and in their original context.

Overall, the letters succeed in dragging the reader into the hot deafening confines of those early tanks. Officers lead their machines forward through the fog of war, often straining through smashed periscopes that splinter their faces with glass. At the front, the Army Service Corps drivers coax their merciless machines forward; while in the rear, gunners expose themselves to constant danger as they engage the enemy at the closest of quarters. Each story, well told, brings the reader into the heart of the battle and leaves one with much empathy for the men who were the pioneers of the Tank Corps.

The sections devoted to the battles of Cambrai and Villers-Bretonneux were particularly well detailed, adding much new material to consider when reading other accounts of these battles. Though not an all-encompassing history of the First World War or even of armoured warfare, the book is still nevertheless effective in providing greater context while still designed for the specialist and tank enthusiast. For those who are students of armoured warfare, especially, this book presents a rich resource both visually and textually and is a worthy addition to one's Great War library.

Combat Camera IS2007-7464



WIRED FOR WAR: THE ROBOTICS REVOLUTION AND CONFLICT IN THE 21ST CENTURY

BIBLIOGRAPHICAL INFORMATION:

SINGER, P.W. New York: Penguin Books, 2009, paperback, 499 pages, $21.00,

ISBN: 978-0-14-311684-4

Reviewed by Nancy Teeple

Wired for War demonstrates how the evolution of military technologies will change war as we know it. P.W. Singer presents a comprehensive discussion of robotics in war and what happens when humankind's monopoly on war is broken. His aim is to capture the moment of the revolution in warfare and technology that will "literally transform human history."

The author's background reveals significant authority in the field of military affairs and international security. Peter Warren Singer holds a PhD in Government from Harvard University, where he studied under Samuel Huntington. His background includes working for the Belfer Center for Science and International Affairs at Harvard, the Balkans Task Force at the Department of Defense and the International Peace Academy. He was the founding Director of the Project on US Policy Towards the Islamic World in the Sabans Center at the Brookings Institution. He served as coordinator of the defence policy task force of the Obama campaign of 2008. President Obama named him to the Joint Forces Command's Transformation Advisory Group. He has published two other books: *Corporate Warriors: The Rise of the Privatized Military Industry* (Cornell University Press, 2003) and *Children at War* (Pantheon, 2005).

Singer's explanation for writing a book on robots and war is summed up in the book's first sentence: "because robots are frakin' cool." With greater seriousness, the author indicates that this discussion represents a convergence of the study of warfare, history, politics, science, business, technology and popular culture. Although the text contains a number of quotations from science fiction entertainment, such as *The Terminator*, *Battlestar Galactica* and *Star Wars*, these references are presented in a sophisticated combination with statements by leading scientific and military experts, ultimately demonstrating how military technology has reached a level of evolution previously considered only within the realm of science fiction.

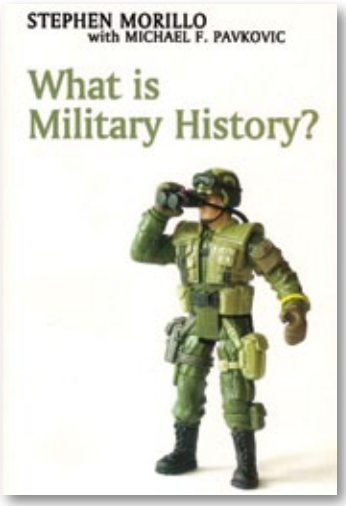
The text comprises four years of research, with a range of sources from traditional military theory and history to contemporary strategic scholarship with a view to current research and development in unmanned aerial vehicles (UAV), artificial intelligence (AI) and nanotechnology. The author admits to a unique approach to the study in which the scholarship providing data is combined with references to popular media, indicating parallels and lessons in mass media. The inclusion of discussion with military sources (including military leadership, pilots of UAV drones, special operations force personnel and

ground troops in Iraq and Afghanistan) lends authority to the text as these sources represent the real-world application of technology in warfare.

The text is presented in two parts. Part 1 considers the changes being created as a result of new technologies, robotics and AI in warfare. This section details the types of robotics technologies currently being used in the battlefields of Iraq and Afghanistan, such as unmanned robots employed to diffuse improvised explosive devices (IEDs) and UAV drones providing reconnaissance/surveillance and, more recently, killing. The increasing use of robotic systems and AI in warfare is described by Singer as a paradigm shift towards the "singularity" leading to a fundamental change in our capabilities to fight—the real revolution in military affairs, which is further addressed in the second half of the book. Part 2 considers what the changes mean for humanity. Ethics is a focal point in this discussion, as is the need for addressing unmanned systems in doctrine—a topic mainly neglected in political, academic and military circles. The Laws of Armed Conflict are decidedly silent on robotic and AI applications in combat, as military analysts indicate that international law, written for the Second World War, is being applied to Star Wars technology. Paradoxically, the human factor is a constant theme in the changing dynamics of employing unmanned systems in combat roles in terms of the issue of proportionality in war, psychological effects on the enemy—as well as the public at home, changes in military culture and technological Darwinism—i.e., the roles of human soldiers as compared to their robotic counterparts. Ultimately, Singer argues that the robotics revolution is forcing the re-examination of what is possible, probable and proper in war and politics. This leads to the reshaping, re-evaluating and reconsideration of plans, strategies and tactics to be used in future conflicts, requiring new doctrines. Unfortunately, Singer highlights that we are completely unprepared for the change that is coming faster than anyone ever expected. Although we are just now creating the frameworks that will fill the vacuum of policy, law, doctrine and ethics, Singer claims that leadership is not equipped to handle all the emerging complications and dilemmas of this new paradigm.

One might criticize the text as representing a US-centric discussion; however, such concepts are applicable to Canadian (and other nations') interests in employing military technologies, such as UAVs. The text also references a few applications of technologies in other nations, such as Japan and China, which expands the discussion at least in recognition of foreign robotics developments. Examples of foreign innovations also appear in the illustrative plates depicting Japanese robotics, among the various photographs and descriptions of American UAVs, IED robots and unmanned submarines.

This book is highly recommended and would be an advisable inclusion among military and strategic studies reading lists. Traditional academics might be put off by the various popular culture references, whereas others might find they enrich the discussion. Due to the range of subject matter, information sources and discussion topics, the author himself claims that this book is not aimed at just one audience, suggesting that people of all sorts of interests and backgrounds would benefit from examining the issues of robotics and war.



WHAT IS MILITARY HISTORY?

BIBLIOGRAPHICAL INFORMATION:

MORILLO, Stephen with Michael F. PAVKOVIC. United Kingdom: Cambridge Polity Press, 2006, softcover, 150 pages, $23.99, ISBN: 978-0-7456-3391-6

Reviewed by Colonel Peter J. Williams, CD

In her poem entitled "The Loneliness of the Military Historian," Canadian author Margaret Atwood writes, "Confess: it's my profession that alarms you. This is why few ask me to dinner…."[1]This is a sentiment with which the authors of this slim, but useful volume can identify, as they state on the opening page that the field of military history, "… is not the most respected branch of historical inquiry in academic circles."

This book is part of a series of studies on various fields within the larger discipline of history such as cultural history, medical history and environmental history. The authors, both American, come from both the civilian and military academic circles: Professor Morillo is the Jane and Frederic M. Hadley Chair of History at Wabash College, Indiana while Professor Pavkovic is Associate Professor, Strategy and Policy at the US Naval War College in Rhode Island. The authors attempt to answer the question posed in the title by addressing what the subject is about, who studies it and why do they do so.

The book is divided into six chapters as follows:

- An Introduction to Military History;
- Military Historiography;
- Conceptual Frameworks;
- Current Controversies;
- Doing Military History; and
- The Future of Military History.

In the second chapter, the authors trace the development of military history as a distinct field within the overall discipline of history and credit nationalism as well as the ideas of progress and romanticism as the three key influences in this regard. The authors also state that the fact that most 19th century history, while focused on the art of war as its central topic (see Clausewitz, Jomini et al), was also nationalist, racist and Eurocentric when providing the historiographical context with which it confronted the "ugly facts" of 1914–1945. Finally, the authors contend that the release of the English historian John Keegan's seminal work *The Face of Battle* in the 1980s, which analysed the experiences of the common soldier, gave the field of study more respectability and launched the period that the authors refer to as "The New Military History."

I found the chapter on current controversies particularly enlightening. The authors contend that there are two types of controversies in this regard: those concerning facts and, more importantly (and which the authors focus on), those regarding interpretations of what are by their very nature complex events. Several such areas of disagreement are discussed including the Western (European) way of war, the origins of "blitzkrieg" and others. The authors, however, believe that controversies surrounding the nature of so-called "military revolutions" are the most contentious.

In the end, the authors conclude that the field of military history has a bright future and indeed they list several emerging trends such as the role of women and the impact of the so-called "Global War on Terror" as an impetus with regard to the study of asymmetric conflicts. With regard to the latter, they note that a wider, longer-term trend may be at play, that is, the decline of state versus state conflict and the proliferation of civil wars, guerrilla conflicts and terrorism. Finally, the authors merely note that the advent of the information age will likely have an impact on the discipline but offer little more than that; I would have liked to have seen more analysis on what this may mean in terms of the future existence of memoirs, diaries and other personal papers of future military leaders, which have provided such a treasure trove for researchers and writers in the past.

In defining their terms, the authors purport to use a broad definition of the term "military history," which they see as including not just the history of war and wars but also any historical study involving combatants (including air and naval) and military institutions. That said, the book does tend to have a land-centric bias at times. The Notes Pages at the end of the book are relatively extensive for so short a work, and as a guide to newcomers to the field, a section entitled, "Suggestions for Further Reading" is included and contains many of the quintessential works on military history from the Greco-Roman period to the modern day.

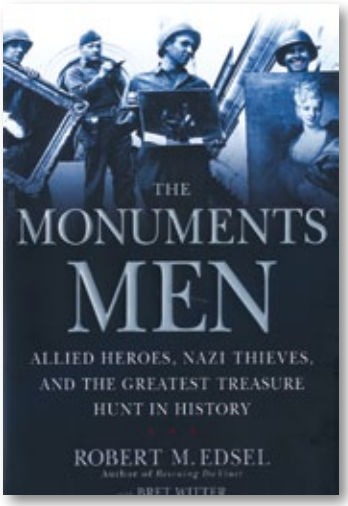
On the down side, I found this book somewhat hard going at times in terms of the language, which tended toward the academic, particularly when discussing conceptual frameworks. The slight bias toward land-based operations was mentioned earlier and is perhaps understandable: some purists, and indeed many bookstores, distinguish between "military" and "naval" or "maritime" history. On a related note, there appeared to be more of a slant toward American readers throughout the work: in the chapter entitled "Doing Military History," after describing various educational institutions in the United States which offer military history programs, the following sentence appears: "Although concentrated in the US, there are also programs [sic] in England and Canada." A subsequent footnote makes passing reference to the Canadian Forces College and the Royal Military College of Canada. It would have been nice to have the authors make reference to our civilian universities with strong military/naval history programs, such as The University of New Brunswick, Dalhousie University, Wilfred Laurier University and The University of Calgary. Indeed, perhaps a Canadian version of this book is warranted.

That said, one need only visit one's local branch of a Chapters bookstore and view the Canadian section in the military history shelves. With books about Canada, written by Canadians, appearing with increasing frequency one can only conclude that the military history field both in and about this country is flourishing. Whether these authors have attained more respect than the colleagues referred to by the authors may be open to question, but certainly the quantity and quality of stories our writers are telling are more than enough for them to dine out on for some time to come, perhaps even at Margaret Atwood's table!

This book is recommended for students deciding whether to start studies in this field and for educators who wish to "encourage les autres."

ENDNOTES

1. Margaret Atwood, "The Loneliness of the Military Historian" from Morning in the Burned House. Copyright © 1995 by Margaret Atwood. Used by permission of Houghton Mifflin Company. Accessed from www.poetryfoundation.org/archive/poem.html?id=177286



THE MONUMENTS MEN: ALLIED HEROES, NAZI THIEVES, AND THE GREATEST TREASURE HUNT IN HISTORY

BIBLIOGRAPHICAL INFORMATION:

EDSEL, Robert M. with Bret WITTER. New York: Hachette Book Group Inc., 2009, hardcover, 473 pages, ISBN: 978-1-59995-149-2

Reviewed by Major Andrew B. Godefroy, CD, PhD, pIsc

The Second World War ravaged every conceivable aspect of life, and as the Allies discovered after victory in May and August 1945, their adversaries posed as much of a danger to the past as they did to the future. In their recent book, *The Monuments Men: Allied Heroes, Nazi Thieves, and the Greatest Treasure Hunt in History,* authors Robert Edsel and Brett Witter reveal the incredible attempt by the Nazis to loot the world of it's greatest historical treasures, artworks and monuments. No less incredible, however, in the focus of their story is a group of unassuming yet highly dedicated men and women who raced to locate and recover these stolen icons, and in many cases doing so just in the nick of time.

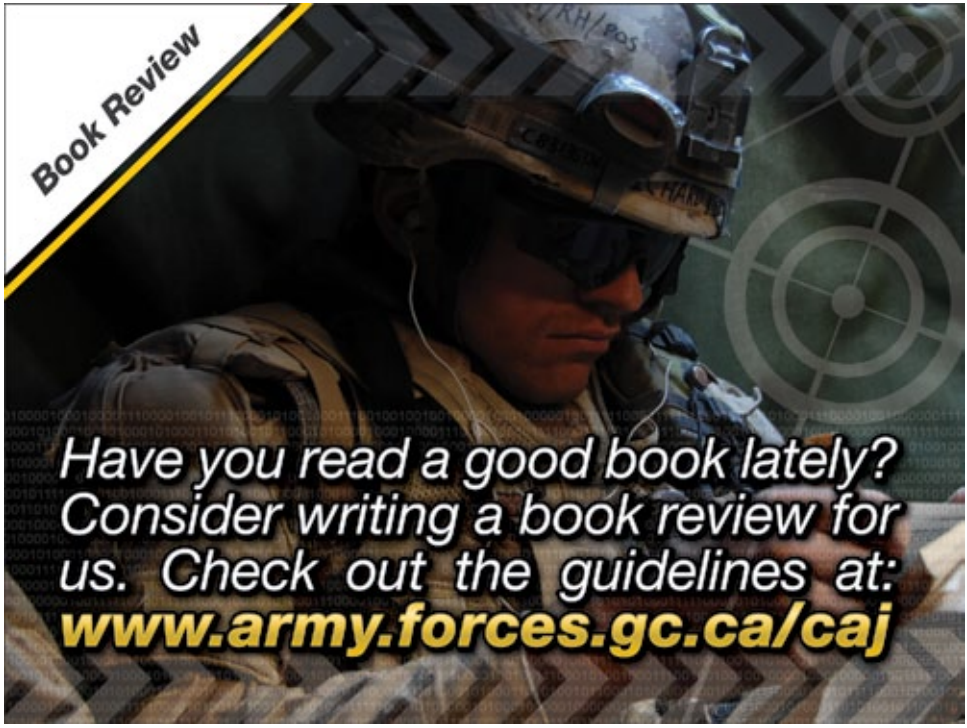
In the weeks and months following the fall of western Europe and the invasion of Poland and Russia, Adolf Hitler issued orders for the collection and relocation of hundreds of thousands of valuable objects, works of art, jewellery, paintings and other priceless artefacts for "safe keeping" and eventual transfer to Germany. His Nazi war machine established several official organizations such as the notorious *Einsatzstab Reichsleeiter Rosenberg (ERR)* to facilitate this work, carrying out what one writer later described as the systematic "rape of Europe." Worse, the Nazis' desire to own the most valuable works of art was only matched by their desire to equally rid Europe of what they considered its "undesirable and degenerate" art. The result was the destruction of thousands of pieces of modern art, literature and documents that were not deemed to be creations in the true Germanic style.

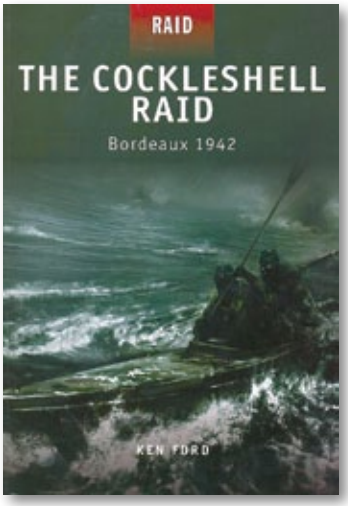
Written in a readable and entertaining style, Edsel—who was the founder of the Monuments Men Foundation for the Preservation of Art—and co-author Witter have delivered an enlightening and thought-provoking tale that is bound to make anyone who appreciates art or has seen such great works with their own eyes to reflect deeply upon just how close the world came to losing them forever. The story is so amazing in fact that at times the reader will find himself almost in disbelief, feeling both frustration and relief at every page.

Yet the words are accompanied by a good selection of incredible images—one of Hermann Goring choosing between two paintings by Henri Matisse stolen from the Paul Rosenberg Collection. Another shows the massive horde of gold and treasures buried in the Merkers Mine in Germany. Another still, depicts Monuments man George Stout delicately recovering Michelangelo's Bruges Madonna from a

salt mine in Altaussee, Austria. The stolen Ghent Altarpiece was also rediscovered here. But perhaps the greatest image is that of two American soldiers, Dale Ford and Harry Ettlinger, holding up Rembrandt's *Self Portrait* that they had just recovered from a Nazi mine stash in Heilbronn.

At 473 pages, the book is both comprehensive and detailed in its account and will serve as a valued popular companion to other academic works on this subject. Divided into five parts and supplemented with decent maps tracking the movements of the Mouments Men teams across Europe, Edsel and Witter have done justice to the subject and will undoubtedly entice readers to want to learn more. For those military readers involved in civil-military cooperation (CIMIC) or influence activities (IA) tasks, *Monuments Men* makes for an excellent case study of civil affairs operations in zones of conflict. This book is recommended reading for both soldiers and students of cultural history.





THE COCKLESHELL RAID: BORDEAUX 1942

BIBLIOGRAPHICAL INFORMATION:

FORD, Ken. Oxford: Osprey Publishing, 2010, 64 pages, $22.00, ISBN: 978-1-84603-693-4

Reviewed by Sergeant Kurt Grant, CD

As 1941 came to a close, Germany, despite still winning the war, was facing shortages of specialized raw material to sustain its efforts. This in large part was due to the Allies becoming more effective at closing the noose around Europe and blockading any shipments. While Germany was able to get many of the raw materials it required from within the territories it had overrun, highly prized items such as rubber, tungsten and special animal oils could only be obtained from the Far East. As the Battle of the Atlantic heated up, blockades began to impinge the flow of materials, and in response, Germany turned to "blockade runners"—such as the *Dresden* and the *Portland*, based out of the occupied city of Bordeaux—to deliver the vital supplies. The Royal Navy, the Air Force, and the Army, aware of the importance of the port, all considered plans to attack it but in the end declined action citing the fact that the city was too well protected and located 60 miles inland and in the heart of coastal France occupied by the Germans.

If Britain was going to have an impact on port operations, extraordinary measures would be required. Enter the Combined Operations Development Centre (CODC) and the school of dirty tricks. Ken Ford, in his book *The Cockleshell Raid: Bordeaux 1942*, tells the tale of how, under the command of Royal Marine officer Major H. G. "Blondie" Hasler, the CODC was tasked to look at various means of attacking ships with small parties of men. Hasler was not new to this task and had previously proposed the use of "underwater swimmers" (the precursors to modern day divers) and "canoes (the British never seem to get the use of this term right, what they're really talking about here are sea kayaks) to deliver men and munitions on target. Many of his early ideas were met with scepticism and resistance from higher command—that is until someone else proved, as in the case of the divers, it could be done. But that doesn't mean that command wasn't open to trying new ideas. For instance "as part of his investigation into attacking enemy ships in harbour by covert means, Hasler was asked early in 1942 to develop a British version of the exploding motor boat" after the success of an Italian operation using a similar device. Nicknamed the "Boom Patrol Boat" (BPB), it was never put into action as they couldn't quite work out how to rescue the driver after he jumped ship once he sent the boat on its way toward the target.

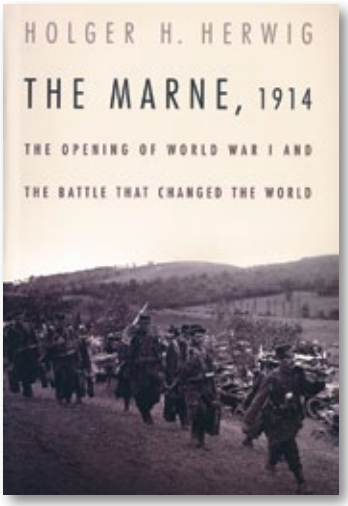
The use of sea kayaks or "cockleshell boats," however, proved more promising. Ford does a good job here of setting the scene, and one gets a real sense that in the early days of its development they really were flying by the seat of their pants. That said, Ford takes the reader through the operation from developing the background to the operation, the initial strategy, planning, training, conducting the mission, and finally the aftermath.

Even by today's standards the mission would be considered risky. The men were to be dropped off near the mouth of the Gargonne River then make their way 60 miles upstream by night over four days and plant limpet mines on the sides of whichever ships were in dock at the time. It seems simple enough, that is until you realize that the mouth of the estuary had three tidal raceways (standing waves created by the outflow of water from the river), a German in-shore naval base complete with shore batteries, four German patrol boats, and 60 miles of river flanked by towns and villages populated by a French peasantry scared to death helping the enemy—in this case the English—lit up like a Christmas tree because there were no light restrictions. But wait, there's more. Even if they did make it all the way to the city of Bordeaux (at night—in December), plant the mines and escape back down river, they were not going to be picked up at sea. Instead, the plan called for all the boats to split up and the men to make their way 100 miles inland through occupied territory to a small town in unoccupied France where they were to be met by the French Resistance and smuggled back to England through the "Mary Claire" escape route.

Not surprisingly, things started to go wrong right from the start. The plan called for six two-man cockleshells to be launched from a submarine near the mouth of the river. Even before launching, one of the boats was irreparably damaged as it was pulled through the hatch and subsequently scrubbed from the mission. The next was lost in the first tidal race and though the occupants made it to shore, their fate was sealed when they chose to give themselves up rather than try to escape. The next was lost in another tidal race and though the men were dragged close to shore by their comrades, they succumbed to hypothermia before they could make landfall. This left three boats. One was separated in the night, and another struck some form of floating debris and wound up sinking. The two men were subsequently rescued by French fishermen and turned over to the Germans. This just left Hasler and his partner, Corporal Sparks. Remarkably, the night prior to the raid the missing cockleshell appeared, and the two boats put in the attack the next night.

The Cockleshell Raid is a remarkable tale of iron will and determination to succeed despite the odds. Though the raid succeeded, the 16 limpet mines planted only caused minor damage to the ships attacked. More importantly, however, was the slap in the face to the Germans and their notion of security. As well, it was a real boost to British special operations as it proved beyond a shadow of a doubt that small groups of highly trained soldiers could achieve the seemingly unachievable. This may be something we take for granted today with the plethora of special operations we read about in the media, but not so in 1942 and it is here that we see the birth of all special operations.

With their RAID series, Osprey books have hit on a formula that works well. The reader gets a real sense of the entire operation from concept to execution and *The Cockleshell Raid* is no exception. This is bite-sized, operation-specific history that is easily devoured in an afternoon's sitting and thus comes highly recommended.



THE MARNE, 1914: THE OPENING OF WORLD WAR I AND THE BATTLE THAT CHANGED THE WORLD

BIBLIOGRAPHICAL INFORMATION:

HERWIG, Holger, H. New York: Random House, 2009, 391 pages, $35.00,

ISBN: 978-1-4000-6671-1

Reviewed by Ben Lombardi, PhD

In the opening weeks of the First World War, Europe witnessed an unprecedented display of military power. Three huge German armies, totalling nearly half a million men stormed through Belgium and northern France in an effort to trap their French and British opponents in a *Kesselschlacht* (battle of encirclement). Four other German armies, numbering close to 700,000 men, engaged opposing French forces in what came to be known as the Battle of the Frontiers. When the fighting ebbed a few weeks later, Germany had lost what came to be known as the First Battle of the Marne (the second was to occur four years later), and the armies began entrenching. The author, a noted military historian, argues that not only was it the most decisive battle since Waterloo (1815), but it helped lay the foundations for the violent twentieth century: "Without the Battle of the Marne, places such as Passchendaele, the Somme, Verdun and Ypres would not resonate with us as they do. Without the Battle of the Marne, most likely no Hitler; no Horthy; no Lenin; no Stalin.[1]

In late-July 1914, as Germany confronted the outbreak of a European war, the Chief of the General Staff, Helmuth von Moltke, assured Kaiser Wilhelm II that while it would be a "horrible war" that "will destroy civilization in almost all of Europe for decades to come," there was no better time to strike.[2] And, yet, the Germans had no formal operational plan. The Schlieffen Plan was little more than a General Staff memorandum, and reliance on it represented a gamble— "a high-risk operation born of hubris and bordering on recklessness."[3] It called for a powerful right wing to sweep through Belgium and France pushing the French Army against a much weaker left wing that would largely remain stationary along the Franco-German border. The ensuing battle, a modern Cannae, would yield a *Vernichtlungschlacht* (a battle of annihilation). Afterwards, Berlin could then re-deploy its forces east and hurl them at the more ponderous Russian Army. Sadly, for the General Staff, the Schlieffen Plan called for vastly more troops than was available and failed to account for the fog and friction of war. And while logistic support was superb at the outset, a weakening of the right wing, poor communications, rivalries between the

Prussian and Bavarian armies, and the foibles of senior commanders, all militated against victory. More significantly, the Plan had also been formulated in a political vacuum, for there had been no coordination within the German government or even with Germany's ally, Austria-Hungary.

Herwig's discussion of pre-war German military thought is not as comprehensive as either Jehuda Wallach's *Dogma of the Battle of Annihilation* or Arden Bucholz's *Moltke, Schlieffen and Prussian War Planning*. Instead, it focuses on events in the war's opening weeks, where nationalism combined with poor intelligence, intense violence and panic, to produce poor command decisions and numerous atrocities. Staggering casualty rates that war gaming had never predicted undermined the striking power of armies. In describing the attempt to take the Liege fortress complex, Herwig quotes a Belgian officer to describe the carnage:

> *As line after line of German infantry advanced, we simply mowed them down. … They made no attempt at deploying, but came on, line after line, almost shoulder to shoulder, until, as we shot them down, the fallen were heaped one on top of the other, in an awful barricade of dead and wounded men that threatened to mask our guns and cause us trouble.*[4]

One normally associates such images with the Russian Army in the First World War, but the need for a speedy victory induced German commanders to be reckless with their soldiers' lives, even when they lacked a basic appreciation of the battlefield. Indeed, the initial encounters in the Western campaign were little more than melées, with commanders unable to coordinate their forces to exploit opportunities. As Herwig asserts, the Battle of the Frontiers was not at all central to either the French or German plans, but took on a life of its own with huge numbers of casualties for both armies.

If the French army had "mules" in senior ranks, the decisive leadership exhibited by Joseph Joffre offset the deficiencies. Imperturbable, Joffre replaced commanders as he saw fit, exploited internal lines to ensure that his front held and, most important, never lost sight of the strategic goal of the campaign. The same description cannot be applied to the Germans. The conduct of the Marne depended upon von Moltke and the commanders of the three armies of his right flank. Von Moltke never wanted the position he held and was overwhelmed by the responsibilities. Unlike the peripatetic Joffre, he did not leave headquarters at Koblenz until after the battle was lost. Communication problems effectively shut him out of the ongoing operations. Von Bulow (Second Army) was too old for such a senior command and seemed at sea whenever deviations from the Plan were encountered; furthermore, his chief of staff was medically unfit. Von Hausen (Third Army), whose unpublished memoirs Herwig relied upon, is revealed to have been too weak-willed for such a key military role.

The traditional history of the battle's turning point holds that as a gap emerged between the German First and Second armies, the British Expeditionary Force (BEF) moved forward. Fearing that the BEF could outflank his armies, von Moltke ordered a retreat, thereby starting a cascading withdrawal that ended the German offensive. According to Herwig, this account is incorrect and greatly exaggerates the BEF's strategic impact. Instead, von Kluck (First Army) was preparing to roll up the left flank of the French Sixth Army deployed to protect Paris when von Bulow, heavily engaged on his own front by an aggressive French commander, lost his nerve and ordered Second Army to retreat. Incredulous, and unable or unwilling to contact von Bulow or von Moltke, but now forced to protect his own left flank, von Kluck ordered First Army to follow suit. The withdrawal was, therefore, von Bulow's doing and it threw away the last chance for Germany to win the campaign in the west. Briefly stepping out of his role as an historian, Herwig argues that von Kluck erred, as he owed it to his soldiers and to his country "to see the battle with French Sixth Army through to conclusion."[5]

There was, however, no guarantee that a German victory would have changed the war's outcome, for a stalemate would still have likely ensued—and just as likely the war would have continued. Von Kluck was undoubtedly correct when he acknowledged the courage and tenacity of the French soldiers as a principal reason for his country's defeat at the Marne. Having retreated for weeks, no German commander expected the French Army to turn and fight so tenaciously: in part because of the decisive leadership not found on the German side.

Herwig delves deep into the German side of this battle, using newly found German sources. In doing so, the reader is presented with a variety of new insights into the leading German personalities who were involved, the strategy that underlay their efforts, and the immediate consequences. In some cases, such as France's use of taxis to achieve the "miracle of the Marne," or the explanation for the German withdrawal in early-September, the accepted history is shown to be incomplete or completely misleading. There are a number of minor errors that should have been caught by editors. Several of the picture captions are incorrect and the commander of the Russian army is misnamed.[6] *The Marne, 1914* is nevertheless an engaging work from which readers will benefit. Professor Herwig should be congratulated for telling a good story, but also for the excellent scholarship that supports it.

BEN LOMBARDI works at the Centre for Operational Research and AnalysisDefence Research and Development Canada in Ottawa

ENDNOTES

1 Holger H. Herwig, *The Marne, 1914: The Opening of World War I and the Battle That Changed the World* (New York: Random House, 2009), p. xii.

2 *Ibid.*, p. 12.

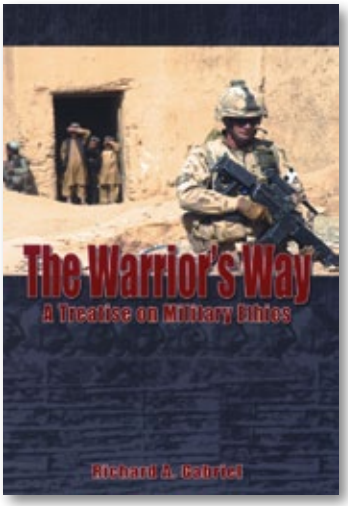
3 *Ibid.*, p. 37.

4 *Ibid.*, p. 111.

5 *Ibid.*, p. 283.

6 *Ibid.*, note on p. 290.

Source: Combat Camera



THE WARRIOR'S WAY: A TREATISE ON MILITARY ETHICS

BIBLIOGRAPHICAL INFORMATION:

GABRIEL, Richard A. Kingston: Canadian Defence Academy Press, 2007, paperback, 225 pages, $24.99, ISBN: 978-0662461159

Reviewed by Captain Thomas E. K. Fitzgerald

Fort Pillow,[1] Malmédy,[2] Abbaye D'Ardenne,[3] My Lai 4,[4] Abu Gharib,[5] Nanking,[6] Bataan,[7] Belet Huan,[8] Katyn,[9] Mallow and Fermoy[10]—military history is replete with examples of soldiers committing criminal acts while in uniform. These episodes from the distant and near past cause those who care about the military to ask themselves, "What happened?" "How did we get to this point in time?" "Is it the individual or the collective who is responsible?" "What is to be done?" "How do we instil in our leaders what is right and how to recognize it when it occurs; conversely, how do we recognize what is wrong and choose not to do evil?" In essence, does a need exist to teach ethical behaviour to our soldiers or, more fundamentally, do military ethics as a distinct school of thought, even exist.

Military historian, retired US Army officer and now Distinguished Adjunct Professor in History at the Royal Military College of Canada (RMC), Richard Gabriel wrestles with these issues in his well-written *The Warrior's Way: A Treatise on Military Ethics*. This book is in many respects an updated version of his 1982 book, *To Serve With Honor: A Treatise on Military Ethics and the Way of the Soldier*.[11] *To Serve with Honor* was written as a response to recent events in the US military—the Vietnam War, My Lai, the cheating scandals at various military academies, the introduction of the All-Volunteer Force (AVR) in the American military while *The Warrior's Way* responds to what the author perceives as an absence of training in the area of ethical reasoning among the military profession and a pervasive military environment which encourages a propensity to resolve ethical dilemmas "always in favour of the organization's imperatives."

Fundamental to a study of military ethics is the acceptance of the premise that the military is distinguishable from every other social collective. This distinction flows from several intrinsic attributes: first, the military has the ultimate responsibility to serve and to protect the society from which it sprung. Second, the military is different from society in the very nature and extent of the personal service offered by its members. No other collective is prepared to die or to kill in the direct performance of its military service—the so-called clause of "absolute liability." No other collective is prepared to be placed into

situations where death may result and no other association of individuals permit its leaders to order people into situations where the death or serious injury of its members may result. Finally, members of the military have the ultimate and exclusive monopoly on military practice, which is to say, that aside from the mercenary or the soldier of fortune, as long as one remains a member of the profession of arms, one maintains a monopoly on its practice. It is because of these differences, Gabriel writes, that a code of ethical conduct is necessary so that soldiers can sort out ethical problems in combat and peacetime and (hopefully) live with the consequences of their decisions.

The unique nature of military service requires, Gabriel asserts, that it be governed by a series of voluntary accepted obligations or ethics which require, in its purest sense, placing service to community (the military profession) over one's self interest. The absence of a code of ethics setting out these professional values intrinsic to the profession of arms would permit self interest or, as Gabriel characterizes it, entrepreneurialism or "psychological egoism" to creep in, replacing profession with occupation, vocation with avocation. A code of professional ethics would potentially eliminate or, at least, reduce a number of systemic challenges endemic to any military: occupationalism (military service equated with civilian occupations), manageralism (the penetration of the profession by civilian business values and concepts), bureaucratization (the mindless obedience to orders without reasoned reflection) and specialization (the rapid rotation of job assignments leading to loyalty to the trade and not to the profession).[12]

Ethics often collide with the concept of loyalty—loyalty to whom, to what is obligation owed? Is it to the subordinates, to the military as an institution, to the state? All difficult questions to answer. Clearly, for the soldier to remain ethical, they cannot follow an unethical order even if the consequences of the order are beneficial or advantageous to the soldier, military or state. A soldier has the legitimate ethical and legal obligation to carry out the orders of his or her superior providing such orders do not violate the soldier's ethical sense and judgement.[13] When confronted with such an unethical order, Gabriel advocates the soldier has a number of options: resign or retirement in public protest, request relief in protest, appeal the order to higher command or refusal. Each option poses its own difficulty to the conflicted soldier. Gabriel maintains that such examples of dissent are, historically, few and far between; primarily, he attributes to the sense that the military centre can "spin" any such protest to its own advantage.

Gabriel's thesis is that now, perhaps at no other time, with the technological ability of the military to kill thousands and the impact one death may have on a commander, particularly, if that death was caused by the soldier being ordered to perform some hazardous duty, the military, as an institution, must consider a formal, written code of ethics. The code should embody what the author considers "the vital qualities of the soldier's character" namely judgement and integrity, loyalty, honesty, sacrifice, obedience, dissent, compassion, responsibility, courage, confidence, decisiveness and imagination, realizing that no one can realistically expect a soldier to exhibit all these qualities all the time.

Gabriel concludes with his vision of a code of military ethics. His nine tenets of his proposed code merit close examination. The need for a military code of ethical behaviour has found resonance in many sections of the US military and are worthy of discussion here. The creation of a code can only strengthen the traditional trust which must exist between civilian society and the profession of arms. Further, he asserts that a code of professional conduct will inculcate in its members a sense of belonging, a sense of its social uniqueness. Finally, a formal code will assist in demarcating or creating a bright line, around professional responsibilities and relationships with non-military actors. Ethical codes will not remain relevant if they are simply created, published and left at that. Ongoing education, discussion and debate are necessary, and, as Gabriel writes, a number of educational and professional fora have a role to play in the continued support of the code.

The Warrior's Way fills a literary lacuna in Canadian military thought. It is becoming increasingly evident that a greater emphasis and importance must be placed on the study, discussion and development of a set of Canadian military ethical standards. Gabriel's treatise may be disappointing to some for it does not offer ultimate answers. Its purpose is not to do so. It does, however, provoke the reader to re-evaluate and consider issues that may not be in the forefront of most soldiers' minds. That is the value of this work.

ENDNOTES

1 On April 12, 1864, confederate troops under the command of General Buford Forrest massacred a number of African-American troops following the fort's surrender.

2 On December 17, 1944, during the Battle of the Ardenne (Battle of the Bulge), elements of the 1st SS Panzer Division, murdered 88 prisoners belonging to the 285th US Field Artillery Observation Battalion. Malmédy was only the one of several similar acts perpetuated by the 1st SS during the battle. More than 70 former members of the SS were tried for their involvement in the massacre. Forty-three death sentences were pronounced (none were carried out) and thirty-three jail sentences were imposed. By 1956, all of the accused had been released.

3 On June 7, 1944, eighteen members of the Nova Scotia Highlanders and the Sherbrooke Fusilier Regiment were murdered at the Abbaye d'Ardenne in Saint Gernaim-la-Blanche Herbe, near Caen. The commander of the 25th Regiment, 12th SS Regiment, Kurt Mayer, was convicted in December 1945 of murder and sentenced to death (commuted to life imprisonment). He was released in 1954. Howard Margolian, *Conduct Unbecoming: The Story of the Murder of Canadian Prisoner of War in Normandy* (Toronto: University of Toronto Press, 2000).

4 On March 16, 1968 elements of Charlie Company, 20/23 entered the villages of My Lai and My Khe and commenced to murder, torture and abuse civilians, primarily children, female and the elderly. Only Second Lieutenant William Calley, commander of 1 Platoon, was convicted of premeditated murder and sentenced to life imprisonment. His sentence was commuted by (then) President Nixon. He ultimately served three years house arrest.

5 Abu Gharib (also known as the Baghdad Correctional Centre) was the location of a series of abuses committed by members of the 372 Military Police Company. In the ensuing investigation and trial, two members of the prison staff were sentenced to imprisonment for dereliction of duty, aggravated assault and other crimes. The commander of the prison was demoted.

6 In December 1937, following the capture of Nanking by soldiers of the Imperial Japanese Army, an orgy of rape, murder and abuse commenced resulting in an estimated 260,000 casualties. Generals Iware Matsui and Hisano Tani were hanged for their complicity in the massacre. Iris Chang, *The Rape of Nanking* (New York: Basic Books, 1997).

7 The Bataan Death March followed the fall of Corrigedor to the Japanese Army in 1942. Prisoners of war were marched to various camps suffering starvation, maltreatment, random beatings and execution en route. Approximately 10,000 Filipino and American soldiers died as a result. General Masharu Homma, commander of the invading force and commander of the troops responsible for these atrocities, was shot in Manila on April 3, 1946.

8 Belet Huan was the home of the Canadian Airborne Regiment (CAR) in Somalia during Operation RESTORE HOPE. It was at Belet Huan that members of CAR tortured and eventually murdered a young Somali teenager.

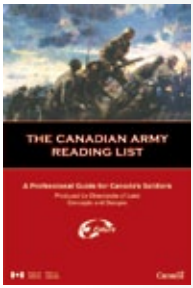
9 Katyn Forest was the location where members (principally officers) of the Polish Armed Forces, captured in 1939 by the Soviet Army, were murdered by elements of the KGB. It is estimated that 22,000 Polish officers were shot and buried in shallow graves.

10 Mallow and Fermoy were Irish villages destroyed by the elements of the Royal Irish Constabulary Reserve (Black and Tans).

11 Westport: Greenwood Press, 1982.

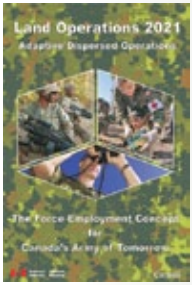
12 The existence of the "careerist" has been adversely commented upon recently by several Canadian officers. Lieutenant-Colonel Ian Hope, *Dancing with the Dushman* (Kingston: Defence Academy Press, 2009) and Lieutenant-Colonel John Conrad, *What the Thunder Said* (Kingston: Defence Academy Press, 2009).

13 The issue of the "manifestly unlawful" order: *R.. v. Finta*, [1994] 1 S.C.R. 701, 88 C.C.C. (3d) 417 has not received much analysis in the legal/military community.



The Canadian Army Reading List

In September 2001, the Canadian Army produced its first *Canadian Army Reading List*. In the time since its publication many new books and articles of interest to the Canadian Army have appeared, prompting the need to revisit the list, and review and expand it. This new and revised *Canadian Army Reading List* retains most of the original publication, while adding a considerable amount of new material for soldiers to consider. The aim of the *Canadian Army Reading List* is to provide an instructive guide to soldiers to explore suitable literature on a wide range of subjects.



Land Operations 2021

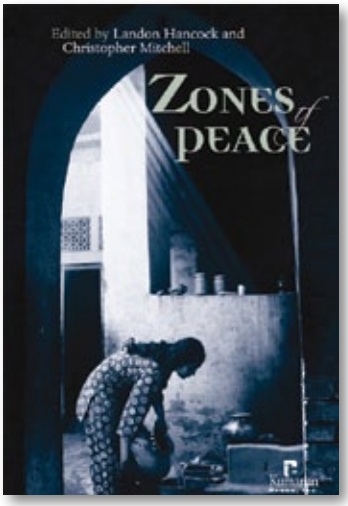
As the 21st Century unfolds, Canada's Armed Forces must be ready to operate in within an international security arena marked by uncertainty, volatility and risk in order to meet national security needs and expectations. This book outlines an employment concept that is ambitious and forward thinking, but at the same time well grounded in the lessons that we have captured from today's operations. In essence, it is a conceptual guide, from which force generation must evolve, acknowledging where we are, what we have achieved, and what we must do to ensure continued success in the future.

Bush Warfare

In the Victorian Era, many young talented Canadians graduating from the Royal Military college of Canada went on to serve in the British Army. William Charles Gifford Heneker, from Sherbrooke, Quebec, was one of them. Between 1896 and 1906 Heneker served in more than a dozen African campaigns ranging from peacetime military engagements to major combat operations. As a tactical commander, Henniker demonstrated considerable talent and skill, and in 1907, he preserved his strategic and tactical ideas on fighting small wars and counterinsurgency (Bush Wars) in this book for future commanders to consider.

Toward Land Operations 2021

To mitigate the unpredictability of future conflict and prepare itself for the challenges it will face in the years ahead, the Army has recently published *Land Operations 2021: The Force Employment Concept for Canada's Army of Tomorrow,* to serve as a guide for land force development through the year 2021. *Toward Land Operations 2021* is the foundation document, developed from a series of operating, functional and enabling concepts that collectively describe an approach to future land operations characterized by the deliberate dispersion and aggregation of adaptive forces in order to create and sustain tactical advantage over adept, adaptive adversaries.



ZONES OF PEACE

BIBLIOGRAPHICAL INFORMATION:

Edited by HANCOCK, Landon E. and MITCHELL, Christopher. Bloomfield: Kumarian Press, 2007, paperback, 238 pages, US$29.95, ISBN: 978-1565492332

Reviewed by Major (Ret) Roy Thomas, MSC, CD, MA (RMC)

In 1978 the Beirut bazaar, where I had made a purchase ten years earlier, was just acres of rubble. At that time the vicious civil war had resulted in death, destruction and disruption of any semblance of normal life in many parts of Lebanon. Nowhere was this more evident than in the area of operations for United Nations Truce Supervisory Organization (UNTSO), before the advent of United Nations Interim Force in Lebanon (UNIFIL) and others, in South Lebanon. Yet in the chaos of Palestine Liberation Organization (PLO) factions, South Lebanon Army (SLA) Christian militia and Israeli retaliatory fires, one small oasis of calm was evident when I arrived in October 1977. The "muktar" of Markaba had somehow maintained, for two incredible years, the neutrality of his little piece of "real estate" while violence ebbed and flowed around. This "zone of peace" evaporated in just a couple of weeks when the PLO suddenly moved in, repulsed a SLA assault and then in turn were driven out when the Israel Defense Force (IDF) invaded South Lebanon in March 1978. After this experience I could hardly let a book entitled *Zones of Peace* rest without a read!

Dipping into this volume, I discovered some of my 1993/1994 United Nations Protection Force (UNPROFOR) experiences[1] were included in the case studies considered in this work. The Eastern Bosnian enclaves, Zepa and Gorazde where Sector Sarajevo deployed United Nations military observer (UNMO) teams, were two of the so-called safe havens mentioned not only in discussions of theory but also in a paper comparing so-called zones of peace in the former Yugoslavia with those in the Philippines.

The book opens with a chapter that places so-called "zones of peace (ZoPs)" within the historical context of "sanctuary." Found in these pages are analysis of examples of both "personal" and "locational" sanctuary in an attempt to set out common factors that seemed to increase their effectiveness.

Since one definition of ZoP is a place that declares itself a "refuge," the inclusion of refugee camps in a ZoP would seem to be a necessity. Refugees, and the availability of sanctuary for them, have led to an "elaborate network of rules governing the granting and withholding of asylum and the rights and obligations of asylum-seekers." However, such camps appear in the pages of this volume primarily in discussion of sanctuary not as ZoPs.

Missing from the theory of sanctuary, and indeed throughout the book (no doubt due to the emphasis on local ZoPs emerging through "expressions of collective will" and "negotiated relationships"), is the sanctuary *sometimes* afforded by the UN flag or that of major international organizations such as the International Committee of the Red Cross (ICRC).

In 1993 the traditional locational sanctuary of "hospital" and "personal" sanctuary provided by being a "doctor" was a concept the international media expected as evident by their consistent criticism of Serb shelling of Sarajevo medical facilities or sniping at medical personnel or ambulances. The international media in Bosnia also appeared to extend their idea of sanctuary to UN installations, at least in Sector Sarajevo.

In 1995, Major General Forand (a much decorated Canadian officer, commander of United Nations Confidence Restoration Operation's [UNCRO] Sector South) provided at least one case of the blue flag of the UN providing sanctuary when he had his headquarters shelter over 1000 Krajinia Serbs during the Croatian armoured assault of Operation STORM.[2] This temporary sanctuary was respected perhaps because of the international media and expectations of the international community, including Croatia's external backers, as well as the desire of the embryo state of Croatia to itself become a member of the international state system.

In later chapters, this book does raise questions about the behaviour of those seeking sanctuary, always an issue, but never addresses what happened in Sarajevo where Bosnian forces fired mortars from within hospital grounds or near UN posts inviting the inevitable Bosnian Serb counter fire and the equally inevitable press accounts of Bosnian Serb violations. Discussion on sanctuaries concludes by placing ZoPs, however fragile their existence, as a subset of locational sanctuaries.

The focus of the following chapter on "The Nature, Structure and Variety of Peace Zones" is on those zones "that are created within states in areas where there is or has been an armed conflict," thus defining ZoPs in terms of geography. Such zones are considered before, during conflict and after peace. The section "Safe Havens and Zones during Violent Conflict" is perhaps of most interest. The labelling of the UN safe havens as "failures" illustrates the difficulty of measuring the effectiveness of ZoPs.

Would the evaluation have been different if the so-called Bosnian safe havens had been regarded as similar to the zone of peace established in the Sudan for delivery of aid under "Operation Lifeline Sudan"? This so-called Sudan ZoP is discussed under the heading of "Specialized and Limited Zones." Post conflict peace building and development also merits a section as does specialized and limited zones.

It is under the heading of "Specialized and Limited Zones" that the 1994 Sarajevo soccer truce of my experience would appear to fall. The premature ending of the World Cup ceasefire of 1994 in Nedarici agrees with the concluding material of this chapter on "Factors Influencing Success or Failure." There was no doubt that the belligerents at the lowest level subscribed to the creation of a temporary ZoP. It was evident to the UN military observers that as World Cup play started that the focus of those in the trenches was not on sniping at each other. The UNMO suggestion that trenches be manned at minimum levels permitting maximum viewing of matches in safe areas was agreed to almost immediately. Thus only soccer scores were reported for several weeks from this area. Outside intervention changed this. Local ownership was not enough! However external intervention such as suggested as obligatory in *The Responsibility to Protect* [3] would appear to be challenged in a later chapter comparing safe havens declared by the UN in Yugoslavia with the locally generated ZoPs in the Philippines.

The chapter on Operation LIFELINE SUDAN, still of interest at least for some Canadians, illustrates this point.[4] The lifeline that was established in the Sudan for the transport of aid demonstrates "the inherent paradox of peace zones" in which "settling for safe spaces" is offset lessening the prospects of an enduring overall peace. However, for those who received succour, the immediate relief to survive another day is perhaps what counted most!

Besides the ZoPs already mentioned, Aceh, Peru, El Salvador and Columbia all provide further cases to ponder in other dedicated chapters.

The concluding material considers these examples with the intent of deriving "some theories about factors," while carefully making clear the caveat that there is a "major problem" in making generalizations about ZoPs. Indeed the key question of neutral space in the midst of conflict, in particular, civil war, is explored without conclusive results. The unfortunate termination of the Markaba ZoP, which I observed in South Lebanon, may have been the result of "impeding a key supply route."

This study merits attention at a time when our country is committing troops on the ground to create "zones of security" which hopefully will eventually become zones of peace. No blueprint for creating such a space will be found in this volume but readers will be rewarded with ideas generated by the accounts of those who have tried what is perhaps the impossible!

ENDNOTES

1 Reviewer's witness testimony in the Galić trial, IT-98-29, 30, 31 May and 3 June, 2002 and the Milosevic trial, IT-02-54, 13 and 14 November, 2003, at www.un.org/icty, provides detail on his Sarajevo experience.

2 Roy Thomas, "A Return to Heroic Leadership: Major-General A.R. Forand's Command in UNCRO's Sector South during Operation Storm," in *Neither Art, Nor Science-Selected Canadian Leadership Profiles*, Volume 2, ed. Colonel Horn and Craig Mantle (Kingston: Canadian Defence Academy Press, 2007), p. 203–224.

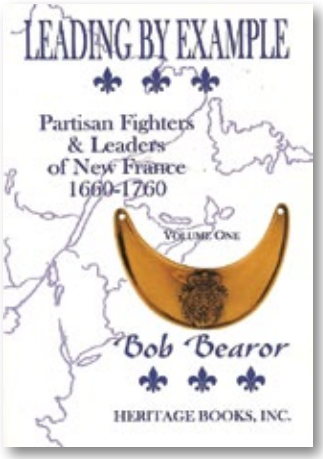
3 Report of the International Commission on Intervention and State Sovereignty, Ottawa, 2001, IDRC.

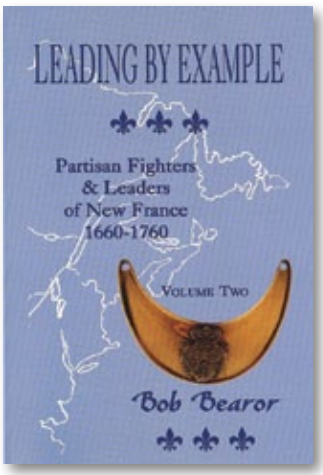
4 Such as Canadian Forces personnel serving on Operation SAFARI (Sudan) and Operation AUGURAL (Darfur).

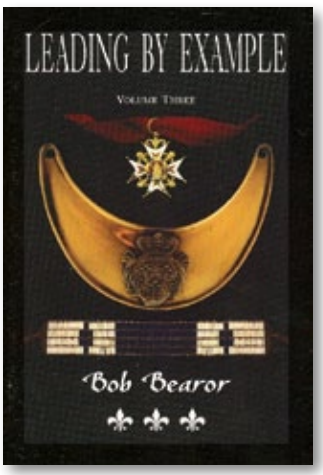
TOWARD LAND OPERATIONS 2021

To mitigate the unpredictability of future conflict and prepare itself for the challenges it will face in the years ahead, the Army has recently published *Land Operations 2021: The Force Employment Concept for Canada's Army of Tomorrow,* to serve as a guide for land force development through the year 2021. *Toward Land Operations 2021* is the foundation document, developed from a series of operating, functional and enabling concepts that collectively describe an approach to future land operations characterized by the deliberate dispersion and aggregation of adaptive forces in order to create and sustain tactical advantage over adept, adaptive adversaries.

Source: Combat Camera







LEADING BY EXAMPLE: PARTISAN FIGHTERS & LEADERS OF NEW FRANCE, 1660–1760

BIBLIOGRAPHICAL INFORMATION:

BEAROR, Bob. Westminster, MD: Heritage Books, 2007, paperback,

Vol 1: 97 pages, US$15.00, ISBN: 0-7884-2068-2;

Vol 2: 131 pages, US$18.00, ISBN: 978-0788423487;

Vol 3: 217 pages, US$25.00, ISBN: 978-0788425141

MEMOIR OF A FRENCH AND INDIAN WAR SOLDIER

Edited by GALLUP, Andrew. Westminster, MD: Heritage Books, 2007, paperback, 240 pages, US$25.00, ISBN: 978-1556138720

Reviewed by Major John R. Grodzinski, CD, MA

The 250th anniversary of the Seven Year's War, or the French and Indian War, as it is known in America, is nearing its end; most of the major engagements have now seen some form of commemoration. Following the fall of Montreal in 1760, very little, at least militarily, occurred in North America (although one must not write off Newfoundland, as we must remember Signal Hill in 2012). Over the last several years, a series of commemorations, re-enactments and symposia at historic locations such as the Fortress of Louisbourg, Fort Ticonderoga, Fort Frontenac and elsewhere has done much to bring this important and fascinating conflict back into popular imagination; it has also spawned the publication of much new literature. Not surprisingly, there have also been some political overtones as Canadians try to come to grips—or avoid the effort altogether—with their history and heritage. Modern perspectives influence discourse, and it is no surprise that much of the new literature of the war comes from America (where the war is seen as laying the foundations of American independence) and occasionally from Britain or even France. The Seven Years' War, along with the American War of Independence, has also gained new interest in American and British military circles, as their militaries come to grip with the nuances of insurgency and counter-insurgency and seek to find some aid from history.

Given the unforeseen outcome of the war and Britain's domination of the eastern half of the continent that later witnessed the appearance of two large and predominantly English speaking countries, one might expect there to be little interest in the French side of the conflict outside of Quebec or Canada. Not so. There is, in the north-eastern United States, and especially in upstate New York and Pennsylvania, a strong interest in the history of New France. Within that region numerous re-enactment groups and amateur and professional historians study French strategy, military operations and soldiering in great detail, and the books in this review are some of their products: a trilogy of biographical accounts of Frenchmen who led raids into British territory during the Seven Years War, while the second is a memoir by French soldier Charles Bonin, covering the years 1751 to 1761, during which he participated in many actions of the war. Let us begin here.

Charles Bonin, also known as "Jolicoeur," arrived in Canada from France in 1751, just before the opening of the Seven Years' War. Details of his background are sketchy. Once believed to have been an officer, additional research has concluded that Bonin was a soldier. Bonin witnessed the surrender of Washington at Fort Necessity in 1754, was present at Braddock's defeat on the Monongahela in 1755 and was at the final siege of Fort Lévis in 1760. His memoir was first published in Quebec in 1887 and in 1941 appeared in an English edition edited by the Pennsylvania Historical Commission. This version, entitled *Memoir of a French and Indian Soldier*, includes the notes from both previous editions, plus additional material prepared by the editor, who has written extensively on the Seven Years War, including *La Marine: The French Colonial Soldier in Canada, 1745–1761* (Heritage Books, 2004). Bonin's memoir is a unique insight into the experiences and thoughts of an eighteenth century soldier.

Bonin comes across as a self-confident and organized man, offering interesting insights into the trials of soldiering in those days. For example, in January 1754, Bonin was one of 500 men raised in Quebec for service on the Ohio River. On the 15th, these men left for Montreal "over snow and ice all the way,"[1] a journey that took 11 days. From there, they continued their journey on the frozen St Lawrence River towards Lake Ontario. Sections of the river were quite challenging "where the ice was too weak to risk going upon it,"[2] which meant they undressed, crossed through the open water, dressed and then carried on. After reaching the outpost of Toronto, a detachment was sent to Fort Niagara, while Bonin and the others continued by bateaux to Lake Erie, arriving at Presque Isle on March 8th, from where they began a difficult 19-kilometres portage that took 12 days to complete "because the artillery had to be dragged."[3] It was on April 4th, that their final destination was reached.

We then follow Bonin's further adventures as he encounters the "English commander" at Fort Necessity (Colonel George Washington) to his final action at Fort Lévis in 1760 (the last barrier holding the British from Montreal), which surrendered on August 1760. Bonin describes the capitulation followed a fierce cannonade, in which the French commander, Pierre Pouchot (author of yet another memoir that was published in the United States), ordered them to "use up all the ammunition so that the enemy would not profit by it."[4] Bonin became a prisoner and soon found himself in New York, along with several other French prisoners, where he "learned of the complete surrender of Canada."[5] Bonin was able to return to France, following an interesting journey via the West Indies.

The memoir concludes with several reflections by Bonin on his experiences and some notes about native peoples he encountered. As this was written in later life, these reflections touched upon events after 1763, such the creation of the United States, its expansion into western territories that "were absolutely uninhabited in my time"[6] and how Americans and those living in British North America should not repeat the French mistake of using religion to "civilize the savage peoples."[7] Remember this is an eighteenth century man reflecting the perspective of his time. The descriptions of native tribes are interesting as well. Hurons are portrayed as being "proud, industrious and warlike," as well as being "great runners and bold thieves, but enemies of their neighbours because of the corruption of their morals."[8] There is also an interesting observation about British North America and how "the English of Canada have as of yet done nothing to gain the goodwill of the Canadians,"[9] something that may have reflected a personal hope that this attitude "makes it seem that they [the English] are somewhat indifferent about keeping Canada."[10]

Leading by Example is a three-volume series that recounts the stories of a host of French military leaders of the later seventeenth and early eighteenth centuries that are largely unknown in Canada. These include men such as Jacques Le Moyne and his nine brothers, Charles Michel de Langlade, Joseph-Francois Hertel de la Fresniere, who were all practitioners of "la petite guerre" or "partizan" warfare as it evolved in New France in the conflicts prior to and during the Seven Years' War. Several of them perfected the adaptation of these tactics to North America, leading some writers to credit them as having created an original doctrine of war.[11]

Volume 1 focuses on two of these individuals: Jacques LeMoyne and Langlade and their exploits, such as a winter raid on Schenectady, NY, in 1690; the defence of Quebec in 1690; the 1752 attack on Pickawillany; the 1755 battle of the Monongahela; and the 1759 battle of Quebec. Volume 2 continues with studies on more individuals including a chapter on native foods used for wilderness survival, while volume 3 concludes the series with 11 more biographies. Each of these volumes individually should be required reading for any leader as they offer much about operating in harsh environments, dealing with less than cooperative allies, indigenous peoples, logistics and unconventional operations over large areas of operations. War was indeed complex and irrational, even in the Age of Reason.

While these books are presented as popular rather than scholarly works, the author has examined much of the primary and secondary literature, filling in some of the gaps through his own experience at re-enactment and outback living. Bob Bearor has had a varied life as a US Army paratrooper, semi-pro football player and lastly, firefighter. He also is passionate about "living history," and as a re-enactor, normally depicting French soldiers, he has developed some expertise on eighteenth century outback survival techniques as well as *la petite guerre* and has used this expertise in media productions and local schools. His other books on the Seven Years' War includes the excellent *Battle of the Snowshoes* and *French and Indian War Battlesites: A Controversy*, which are available via Heritage Books at www.heritagebooks.com.

Bearor has made good and extensive use of the archival materials in Quebec and the United States and most of the published document collections and secondary sources to good effect. In doing so, he introduces us to many fascinating characters, such as Hertal de la Fresniere, or "Hertal" as he was known, and gives him credit for being "the father of modern-day forest warfare,"[12] putting himself at odds with those who honour Major Robert Rogers for establishing that canon. Another interesting character is Charles-Michel de Langlade, who was in many actions and involved in numerous raids during the Seven Years War, including a devastating attack against the Jersey Blues, a New Jersey militia unit, on Lake George, or Lac du St Sacrement depending on whose claim you supported, in 1757. In 1759, he fought at Montmorency and at Quebec, while in 1775 and 1776 he rallied natives to the defence of Montreal and Quebec during the siege and attack by American rebels. The following year, he served under General John Burgoyne in the Saratoga campaign. One can go on. This trilogy has a lot to offer and is worthwhile to anyone interested in irregular and colonial warfare and conflicts and Canadian history.

Volume 2 includes an interesting chapter on "trekking" and participating in living history. This is presented as a steady progression of an enthusiast learning, largely through experience how things, such as the basics of survival, were done in the past. Depending on the individual's level of enthusiasm, this can range from toying with a specific aspect of eighteenth century life, to full scale recreations, where everything, whether, arms, dress, accoutrements, such as eyeglasses or rations are period reconstructions—that is made in the same way as they were at the time of Montcalm and Wolfe. This form of "extreme" living history allows the exploration of elements of history that are not possible to find in archives, books or the Internet. Some schemes are also quite elaborate such as a 1987 re-enactment of the 483-kilometres march to the Abenaki Village of St Francis (now Odanak, Quebec), which was raided by Rogers and his Rangers in 1759—the march itself took nearly six weeks to complete. Wouldn't that be great adventure training?

All four books are nicely designed, well presented and affordable. The maps provide fundamental details, including major settlements, some features and waterways, while the images depict re-enactors in various campaign scenes in all seasons.

You will learn a lot by reading these four books. They are among a handful of English language titles that examine individuals and perspectives from, as the cover notes emphasize, "The other side," making them important contributions to our understanding the fascinating history of the Seven Years' War and the eighteenth century profession of arms.

Major Grodzinski teaches history at the Royal Military College of Canada, where he is also a doctoral candidate.

ENDNOTES

1 Andrew Gallup, ed., *Memoir of a French and Indian War Soldier* (Westminster, MD: Heritage Books, 2007), p. 88.

2 *Ibid.*

3 *Ibid.*, p. 88–9.

4 *Ibid.*, p. 184–5.

5 *Ibid.*, p. 189.

6 *Ibid.*, p. 211.

7 *Ibid.*

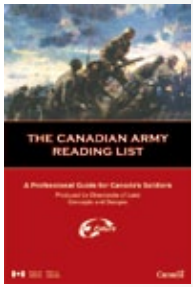
8 *Ibid.*, p. 232.

9 *Ibid.*, p. 212.

10 *Ibid.*

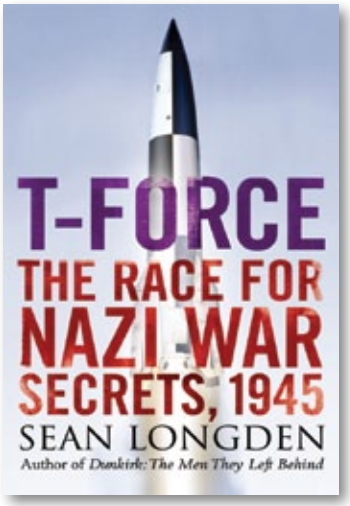
11 For a discussion of this topic, see René Chartrand, *Canadian Military Heritage Volume 1: 1000–1754* (Montreal: Art Global, 1993), p. 88–95.

12 Bob Bearor, *Leading by Example: Partisan Fighters & Leaders of New France, 1660–1760*, vol. 3 (Westminster, MD: Heritage Books, 2007), p. 13.



THE CANADIAN ARMY READING LIST

In September 2001, the Canadian Army produced its first *Canadian Army Reading List*. In the time since its publication many new books and articles of interest to the Canadian Army have appeared, prompting the need to revisit the list, and review and expand it. This new and revised *Canadian Army Reading List* retains most of the original publication, while adding a considerable amount of new material for soldiers to consider. The aim of the *Canadian Army Reading List* is to provide an instructive guide to soldiers to explore suitable literature on a wide range of subjects.



T-FORCE: THE RACE FOR NAZI WAR SECRETS, 1945

BIBLIOGRAPHICAL INFORMATION:

LONGDEN, Sean. London: Constable Books, 2009, hardcover, 379 pages, $32.60, ISBN: 978-1-84529-727-5

Reviewed by Major Andrew B. Godefroy, CD, PhD, pIsc

In the closing months of the Second World War, the Allies began to focus a considerable amount of attention towards recovering the great intellectual wealth of Europe from its former Nazi controllers. For the American and Anglo-Canadian armies, the task began with the creation of specialized formations, some of which focused on matters such as the preservation of culture, monuments and art, while others carried the assignment of securing enemy science and technology. Just as the title suggests, in his latest work, *T-Force: The Race For Nazi War Secrets, 1945,* author Sean Longden has chosen as his subject one of the Allied specialized units created for the latter mission.

Divided into eleven chapters, the book begins in April 1942 with the creation of 30 Assault Unit (30 AU), an intelligence commando unit designed to undertake covert missions to secure knowledge of interest for the Royal Navy. The idea was the brainchild of 34-year old Commander Ian Fleming, who later became famous during the post-war era as the creator of the spymaster character James Bond. 30 AU accompanied the Normandy landings on 6 June 1944 and met with some success in France. Satisfied that there was value in the pursuit and capture of enemy intelligence, Allied supreme command created a special target force or "T-Force" and assigned them the mission of securing Nazi secrets wherever they may be found.

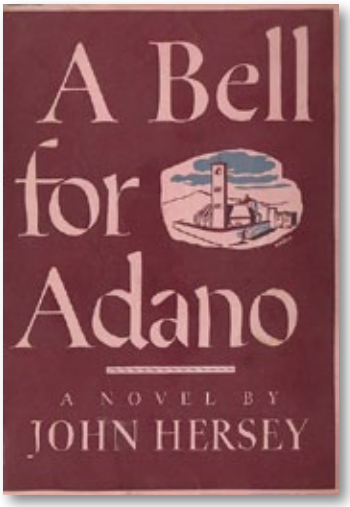
Given the topic, the reader would rightly expect to be entertained by amazing stories of T-Force daring and discovery, but sadly the author manages to blunt this excitement quickly with an overly dry narrative devoid of any real substance. Too many of T-Force's activities are described as "perhaps the most important discovery of the war," yet once described one is left unconvinced that these events were as cataclysmic as the author wants us to believe. Instead, the reader is left with a "cry wolf" sort of feeling after every chapter. Likewise, Longden gets too distracted by events unessential to the story and routinely interrupts the flow of the narrative to explain in too much detail some minor spat between T-Force and other specialized units, in particular its main rival 30 AU. Feeling some need to protect his subject from external criticism, he spends too much time embellishing T-Force's even most minor accomplishments while attacking the actions of others.

For example, Longden writes that Canadian soldiers apparently "not having experienced their own land under attack by the Nazis" (the Battle of the St. Lawrence obviously doesn't count) were witnessed by members of the T-Force "taking their revenge on the local population" by setting fire to towns and looting. His characterization of American soldiers is similar, the Yanks being underhanded and uncaring in their own pursuit of Nazi riches. Meanwhile the British T-Force, which was itself essentially an officially sanctioned and organized force of science and technology looters, is instead justified in its "acquiring," "rescuing" and "evacuating" of German valuables, people and material. The juxtaposition is gross hypocrisy that will leave most non-British readers offended at the author's selective approach to history.

Still, Longden reserves the most space for his constant lashes at 30 AU, which was an often-cited critic of T-Force both during and after the war. Obviously determined to "set the record straight," the author's borderline whining downplays the many operational problems of his own subject, while attempting to make everyone else seem the bad guy. The result is a book that spends more time bickering over which unit really entered some minor town first rather than telling what could have been a fascinating and gripping tale about the capture of the secrets of the Third Reich.

Longden's attempt to cover what he perceived to be "a vast unknown story of the Second World War" is very much a failure. His weak bibliography of secondary sources is missing most, if not all, current scholarly research on the subject and the printed mea culpa above the list of primary sources justifying its incompleteness is also telling of an author that needed to be better organized and spend more time on his research.

Still, the book does offer readers some insight into the chaotic vacuum that existed after the fall of the Third Reich, and Longden has put some effort into conducting interviews with many surviving members of the force to build a lasting record. For those with a specific interest in this subject, *T-Force* may be a bearable enough read to be considered a resource for further learning. For those with less interest and less tolerance for griping, it is recommended to give this book a pass.



A BELL FOR ADANO

BIBLIOGRAPHICAL INFORMATION:

HERSEY, JOHN. New York: Alfred A. Knopf, 1944, hardcover, 269 pages, $15.16, ISBN: 978-0-394-75695-0

Reviewed by Colonel Peter J. Williams, CD

Yes, that's right, 1944. This is an oldie but a goodie with modern relevance.

This novel, which went on to win a Pulitzer Prize and was made into a film in 1945 by 20th Century Fox, tells the story of US Army Major Victor Joppolo, a Civil Affairs Officer, representing the Allied Military Government Occupied Territory (AMGOT) in the small Sicilian town of Adano during World War II. In modern parlance, Major Joppolo's role is somewhat akin to a cross between the commander of a provincial reconstruction team (PRT) in Afghanistan and a civil-military cooperation (CIMIC) officer, roles which do not normally inspire either fiction or non-fiction works of literature. Despite the fact that this book describes events that occurred more than 65 years ago, due to their links with the current fight in Afghanistan, it has much to teach us (if indeed nothing but old lessons) about contemporary operations. In his Foreword, the author writes:

> *Until there is seeming stability in Europe, our armies and our after-armies will have to stay in Europe. Each American who stays may very well be extremely dependent on a Joppolo, not only for language, but for wisdom and justice and the other things we think we have to offer Europeans.*

Quite so. One could almost substitute "Afghanistan" for "Europe" and "coalition soldier" for "American" to describe the situation in Afghanistan that we face today.

The author knows whereof he speaks. John Hersey was a wartime war correspondent for *Time* and *Life* magazines and had already spent time in the Pacific, on Guadalcanal with the US Marines, before moving to the European theatre in the summer of 1943 to accompany Allied forces in the invasion of Sicily.

The key elements of the story are quickly described. Major Joppolo and his team (the intrepid Sgt Borth, a military policeman) arrive in Adano as the representatives of AMGOT. Of Italian descent, his parent having come from near Florence, Joppolo was not a career soldier, having spent his pre-war years variously as a clerk in the Department of Taxation and Finance and in the Sanitation Department in New York City. Within his very first day, he has met all the key town leaders: the mayor, chief of police, the priest, the town crier, and Zito Giovanni the usher, who tells Major Joppolo that his job is to "greet the Americans." Some of these key figures had worked as part of the Fascist regime. Just as quickly, Joppolo is

able to find out what the citizens really want—nothing more than the return of the town's bell, which had once regulated local life. Prior to the Allied invasion, it had been taken away by the Fascists in order that it may be melted down to produce weapons. It becomes Major Joppolo's mission to get a bell for Adano.

The novel then goes on to describe how Major Joppolo fulfils his promise to the citizens of Adano. It is by no means an easy ride as he quickly runs afoul of the local military commander, Major-General Marvin, over mule traffic through the town, an activity that is ostensibly interrupting military operations. On the positive side, he is able to "sweet talk" the US Navy and persuade local leaders to restore the local fishery. In what could be termed a "grey area," he is also confronted with deciding what to do with intelligence provided by the local Mafia. He also has to deal with the local black market and the accompanying inflation. Through it all, while he risks alienating his American superiors, he is able to genuinely connect with the population. The local artist even paints Joppolo's portrait.

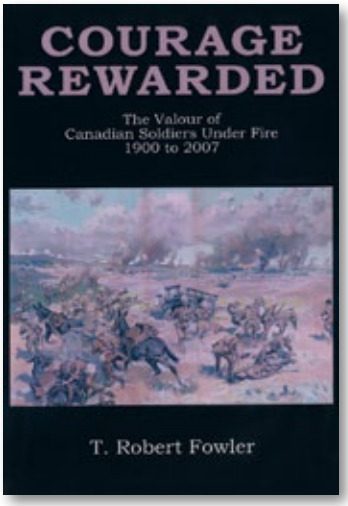
Though the times are different, doubtless many CIMIC and PRT officers, among others, can identify with the challenges faced by Major Joppolo in Adano: determining local needs, leveraging local experience, determining who you can trust and simply "winning hearts and minds." Indeed, I would suggest that this book should be required reading for all those occupying such positions, as part of the CIMIC course generally, and for those who command CIMIC personnel.

Despite having ended almost 70 years ago, the events of the Second World War continue to show no signs of failing to inspire modern authors to produce works related to that period. One hopes that our experience in Afghanistan will similarly convince modern authors, both in and out of uniform, to write accounts of their experiences in CIMIC and other realms; *A Well for Deh-E Bagh*, perhaps? This book is highly recommended.

Editors Note: *A Bell for Adano* is still in print and available through Amazon books.

COLONEL P.J. WILLIAMS is Director Plans Western Hemisphere on the Strategic Joint Staff.

Combat Camera IS2010-4058-02



COURAGE REWARDED: THE VALOUR OF CANADIAN SOLDIERS UNDER FIRE 1900 TO 2007

BIBLIOGRAPHICAL INFORMATION:

FOWLER, T. Robert. Victoria: Trafford Publishing, 2008, softcover, 208 pages, ISBN: 978-1-4251-7024-0

Reviewed by Major Andrew B. Godefroy, CD, PhD, pIsc

The elusive nature of raw courage continues to fascinate the rest of us who are often only vicarious witnesses to these events. Attempting to define and explain courage in terms understandable to others is often a greater challenge still, but in his latest book, *Courage Rewarded: The Valour of Canadian Soldiers Under Fire 1900 to 2007*, historian T. Robert Fowler makes a first-rate effort in bringing all readers closer to the lives and stories of Canada's most valiant warriors.

The author of two previous yet equally important and powerful works on the subject (*Valour on Juno Beach* and *Valour in the Victory Campaign*), Fowler is well situated to take on this latest analysis of the subject. *Courage Rewarded* also adds to his previous body of work by covering in detail new periods ranging from the Boer War to Korea as well as a smaller section dealing with more recent campaigns and actions.

As the title suggests, this is not a typical Canadian military historical narrative, nor is it simply a list of meritorious achievement. Instead, Fowler has attempted to come to an understanding of how and why Canadian soldiers display gallantry in battle and also how those actions have been recognized through the citations recorded for these actions. This latter subject has led the author to draw some very interesting and insightful conclusions. For example, in assessing overall awards for a particular campaign, it is often interesting to see how many awards were granted for contributing to success of the action vice for saving life. Other interesting factors not typically considered are also involved in this outcome, and it is not always purely politics that decide who is recognized for valour and who is not. The total result of Fowler's work here is a sobering read and should cause anyone interested in the subject to reflect more seriously on how and why these soldiers did what they did and how it was recognized by others.

Though not by any means a unique approach to the subject, the author has nevertheless often taken the analysis a step further than many others writing on similar topics. For example, instead of focusing solely on Victoria Cross recipients as most authors do, the majority of his research is devoted to those soldiers who received second and third tier gallantry awards, such as the Distinguished Conduct Medal (often referred to by soldiers as "the poor man's Victoria Cross") and the Military Medal for bravery in the field.

Additionally, he examines meritorious awards as well as those for gallantry not in the face of the enemy. The George Cross and George Medal are often overlooked in studies of gallantry, yet the risks these recipients took were never any less dangerous than those who were in contact with the enemy.

Divided into nine chapters each covering a major conflict or campaign, *Courage Rewarded* is an enjoyable and informative read throughout and is sure to capture the interest of both generalists and specialists alike. Finally, the seven appendixes of the book provide a wealth of additional detail equal to any academic study of the subject, providing a rich resource for other scholars and students of military history. This book is highly recommended to all.

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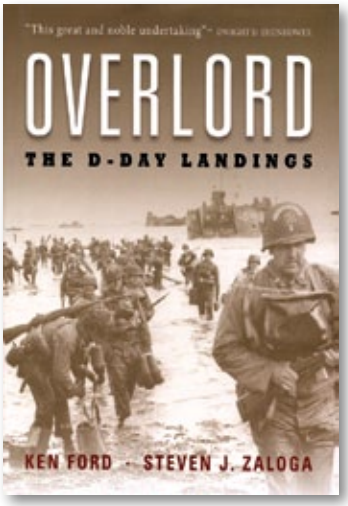


OVERLORD: THE D-DAY LANDINGS

BIBLIOGRAPHICAL INFORMATION:

FORD, Ken and ZALOGA, Steven J. Oxford: Osprey Publishing, 2009, hardcover, 368 pages, $27.95, ISBN: 978-184603424-4

Reviewed by Lieutenant-Colonel Tod Strickland

Osprey is a well-known publishing house out of the UK that specializes in military history, tackled with a fairly basic formula that works very well. Their basic concept is to look at both sides in a given battle or campaign, painting a general strategic overview and then going into tactical level detail that almost always appeals to the amateur historian or military enthusiast. The formula works well because of two factors. One is the calibre of historian that they get to write; many well-known academics and more than the occasional up-and-comer have authored titles in Osprey's extensive library of military histories. Second, they generally do an exceptional job of making the events come to life, through the use of excellent multi-coloured maps and charts, a heavy reliance on photographs and well-written narratives. *Overlord: The D-Day Landings*, co-authored by scholars Ken Ford and Steven J. Zaloga, is one of their recent releases.

There can be little doubt that the D-Day landings were among the most significant events of the Second World War and, although the subject of numerous other books, are certainly worth another examination—particularly when one considers the rapid rate at which we are losing our veterans of this notable event in world history. Looking back with the benefit of over sixty years of hindsight, one cannot help but be amazed at the scope and immensity of the task that both the Allies and the Axis had before them. That hundreds of thousands of men, machines and munitions would fight over strips of sand on the Atlantic coast of Europe is hard to conceive and without equal in contemporary military history. It is a topic that begs for study and understanding, and it is a natural choice for the authors, and Osprey, to tackle with a new book.

Unfortunately, this is not a "new" book and is instead a compilation of five different titles previously published by Osprey as separate volumes. Although this has the benefit of speeding production of the book itself, it does introduce several issues, about which more will be said later. In general terms, the volume works from beach to beach, detailing the opposing forces and then going into detail on both the amphibious and airborne landings. With a few exceptions the scope has been deliberately limited to the events that took place on 6 June 1944 with very little detail on what occurred before or after.

The focus is very much on the tactical level and recounting the minute-to-minute unfolding of the events as they occurred. It is not a book that is either heavy on analysis or attempts to place the events in their larger context. To make matters worse, this work has some noteworthy issues—starting with the opening sentence.

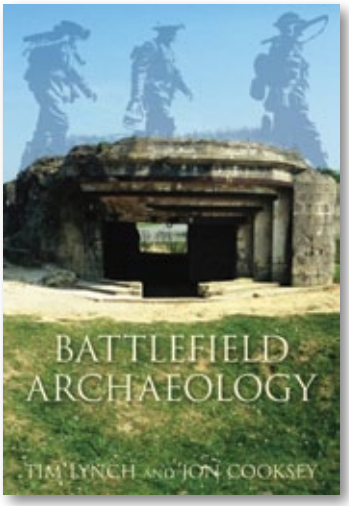
Hyperbole is anathema to an historian. Being overly dramatic discredits the facts of the events and brings into question the substance of all that follows. In this case, to state that, "The battle of Normandy was the last great set-piece battle of the Western world" (aside from ignoring the fact that the book is actually about D-Day and not the breakout that followed the landings) is factually incorrect. It disregards the numerous other set-piece battles that followed both during the Second World War and after. One has to wonder from the outset if the author of the preface remembers the Gulf War and the drive into Kuwait, the landings at Inchon, or the crossing of the Rhine and the battle for Berlin. At best it is overstatement; at worst it is a casual disregard for other events and their relative importance.

Moving into the book itself, it is uneven in its coverage of the events and seems to be largely aimed at an American, and to a lesser degree British, audience. Coverage of the American beaches includes sections on the actions that followed including the clearance of the Cherbourg peninsula. This is in marked contrast to the Canadian efforts whose coverage stops suddenly on the evening of the 6th of June 1944. Similarly, the book has a very land-centric approach to the battles and frequently seems to forget the significant naval and air force contributions that ultimately enabled the landings to succeed. Indeed, when one looks for a listing of the naval vessels or air force squadrons that participated in the fighting, one is left searching the index without positive result.

The scope of the book itself contributes to the problem leaving many noteworthy efforts unmentioned or given short shrift in the text. Putting aside the limited mention of the training and planning which preceded the invasion, or the massive deception effort, which directly contributed to the delayed German reaction to the Allied landings, where is the story of the cross-channel move, with its massive minesweeping operation, that enabled the armada to be at the right place at the right time? Perhaps even more glaring is the complete absence of the establishment of the Allied logistic hub at Arromanches. This is the event that allowed for Allied success during the battles for the beachhead and the breakout from it, at least until they managed to get a workable port. It is an important and significant part of the history of D-Day, and its absence, though perhaps rationalized by the aim of the book, is lamentable. This all the more so because the authors are not true to their scope or even-handed in how the subject matter is dealt with. For example, they opt to tell the story of the battle for Villers Bocage; though interesting and dramatic, it took place on 13 June 1944—well outside the subject matter that these two scholars have chosen to examine.

Another problem that becomes evident when reading is that there are some very annoying inconsistencies as well as errors or inattention to detail. Members of the Canadian Scottish Regiment will likely take offence that they are frequently referred to in the text as being the "Canadian Scottish Rifles." While in and of itself a minor error, it leaves the reader wondering what other faults are present that will only be noted by someone reading with a critical eye. Additionally, because this is a compendium of previously published material, the maps are inconsistent, contrary to what Osprey readers are accustomed to. Labelling and symbology between the various sections frequently change, adversely affecting the ability of the reader to perform a detailed comparison of each of the Allies' landings. This is an obvious fault that could have been rectified by a more detailed editing process.

Putting aside the weaknesses, the book does have some strengths, which commend it to potential readers. What it does cover, it covers well in typical Osprey fashion, fully supported with coloured maps and a significant number of photos. Further, the narrative is well done and full of interesting stories that can inspire the reader to look further into the subject matter. These combine, with the reasonable price, to give the book a degree of appeal to those who are just commencing their study of military history. Yet it is a fact that this is a topic with a wealth of first-rate material that has already been published and is readily available. I expect that even the moderately-serious student of these events will likely find themselves looking elsewhere to get the broad knowledge and historical context that this book lacks.



BATTLEFIELD ARCHAEOLOGY

BIBLIOGRAPHICAL INFORMATION:

LYNCH, Tim and COOKSEY, Jon. Gloucestershire: Tempus Publishing, 2007, paperback, 221 pages, $30.95, ISBN: 978-0752440941

Reviewed by Major Andrew B. Godefroy, CD, PhD, pIsc

The investigation, preservation and interpretation of landscapes of conflict has grown increasingly popular since the end of the First World War, when people began to regularly "tour" battlefields either as part of a pilgrimage or for more professional study purposes. Today, visiting many battlefields is relatively easy, especially in Europe where tourism often depends on providing public access to these historic sites. Still, not all such areas are officially preserved, and in some places even modern day travellers would be hard pressed to discover an official reference that anything happened in these places at all. Thus battlefield archaeologists have no shortage of work awaiting them, though arguably their ranks are expanding as quickly as the nature of their profession changes.

In their book, *Battlefield Archaeology*, Tim Lynch and Jon Cooksey present an extremely helpful and detailed overview of the subject appealing to both amateur historians as well as the serious scholar. In a simple and very readable format, the authors explain how conflict landscapes may be studied, the differences in various approaches to this study and then how any individual whether professional or amateur can participate in that process. This last theme of the book is its greatest strength, and the authors do a great service to the subject through their straightforward educational approach to explaining how literally anyone can become involved.

Adopting a sort of step-by-step approach, Lynch and Cooksey explain how to undertake a battlefield expedition, beginning with the ins and outs of research design as well as the benefits of preliminary primary and secondary source research. Next, they discuss map interpretation, planning the survey and then finally how to go about carrying it out. Accompanying these chapters is a very good section on archaeology and the law, although its focus is primarily on British and European laws affecting battlefield sites in these regions. There is also a chapter on alternative and experimental archaeology, re-enactment and, finally, a good section on how to present the findings of your research efforts.

Throughout the book, Lynch and Cooksey are careful to put such activities in context and aren't afraid to enter the debates of amateur sleuth versus professional archaeologist, as well as the problems with battlefield scavengers and the problems such activities pose to the collection of more valuable knowledge

concerning context of the landscape in which battles take place. The authors are quite successful in making a decent case for encouraging greater amateur involvement in battlefield archaeology, and this book is designed to give people interested in such a pursuit the right tools and knowledge as opposed to bad habits and hints on making a quick dollar finding "treasure."

The archaeology of conflict landscapes has become increasingly popularized over the last decade with a myriad of television documentaries following the exploits of archaeologists and their discoveries. Ever concerned that such exposure puts historical sites at greater risk, it is books such at this that will assuage some of those concerns, and the authors are to be complimented for their efforts. *Battlefield Archaeology* is a great read, educational as well as inspiring for those with a passion for the history of past conflicts. It is highly recommended before your next trip out into the field.

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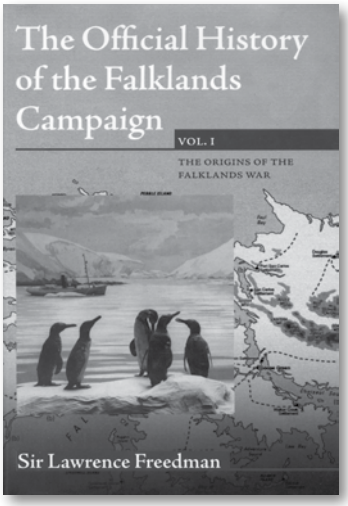
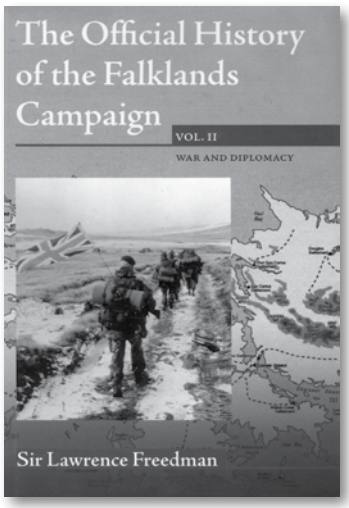


THE OFFICIAL HISTORY OF THE FALKLANDS CAMPAIGN

VOLUME I: THE ORIGINS OF THE FALKLANDS WAR; VOLUME II: WAR AND DIPLOMACY, REVISED AND UPDATED EDITION

BIBLIOGRAPHICAL INFORMATION:
FREEDMAN, Lawrence. London: Routledge, 2007, paperback,
Vol I: 253 pages, £22.99, ISBN: 978-0415419123;
Vol II: 859 pages, £24.99, ISBN: 978-0415419116

Reviewed by Neil Chuka



From April to June 1982, Britain and Argentina fought a brief but intense war over British possession of the Falklands, South Georgia and South Sandwich Islands, all relatively small specks of land in the far South Atlantic. These tiny islands have been controlled by London, and disputed by Argentina, since the 1830s. Like most conflicts, the origins and reasons behind the 1982 war are multifaceted and involve a host of domestic, international and historical factors.

The early 1980s were not especially prosperous times in the UK, with a lagging economy, budget cuts throughout the government and political conditions placing Prime Minister Margaret Thatcher's government in difficult circumstances. In Argentina, the military junta ruled by General Leopoldo Galtieri faced uncertain economic conditions and pressure from elements of the military and the public of Argentina to bring about a successful conclusion to Argentina's claims against British sovereignty of the Falklands. Age-old problems associated with intelligence collection and assessment and military operations characterized the diplomacy and military planning on both sides prior to and during the war. Misperception, mirror-imaging, incomplete or inaccurate intelligence, hostile climactic and geographic conditions, distance and sustainment issues directed how both sides conducted themselves throughout the period in question.

Sir Lawrence Freedman (distinguished historian, professor and Vice Principal of the War Studies Program at King's College, London) was requested by the British Government to produce an official history of the Falklands campaign as part of the their "Whitehall Histories: Government Official Histories Series." This series is produced by historians whose credentials are such that they can be trusted

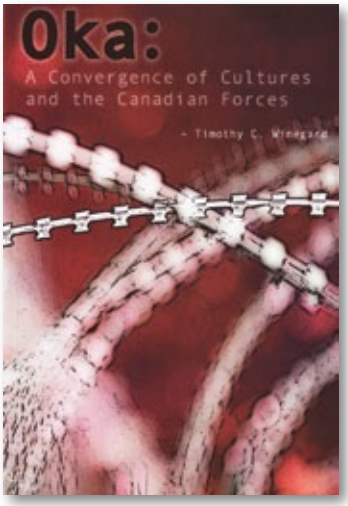
to produce objective studies using the entire range of open-source and classified material on a particular subject to produce a credible secondary source for public consumption while the majority of records remain classified. Freedman's credentials are unquestioned, and he has done a commendable job in producing not only the original version of this official history, published in 2005, but also this revised and updated version in which he corrects some errors and introduces some new material. Despite the fact that references cannot be provided for all the classified material employed, the end product is authoritative, well written, and, somewhat unusual for an official history, highly readable.

Freedman has woven together an incredible amount of detail throughout both volumes that provides the reader with a solid understanding of the long historical background to the conflict and an almost hour-by-hour account of the war from the British perspective. This is not just an account of military operations, but rather a comprehensive diplomatic, political and military history.

The Falklands conflict should not be dismissed as an anachronistic conflict of the colonial or cold war eras. Freedman's account and analysis provide lessons that can inform those studying, or whose profession involves, complex, multi-party diplomacy, or the conceiving and execution of complex joint expeditionary operations. The Falklands campaign involved blue-water, littoral and amphibious maritime operations, tactical and strategic aviation, and land operations in harsh climactic conditions with tenuous logistical support and sophisticated rules of engagement, all conducted under an international and domestic microscope. Freedman also provides analysis and assessments on the effectiveness of various weapons systems and doctrine. While these conclusions are interesting from an historical perspective, perhaps the most important lesson is the fallacy of having complete faith in modern systems or methods untested on the field of battle.

Despite Freedman's thoroughness, there are several small criticisms. First, although it may be necessary, the lengthy discussion of the various diplomatic manoeuvring before, during and after the fighting in the South Atlantic is, at times, laborious to read. However, it would probably prove impossible for any author to convert the conflict's diplomatic minutiae into enthralling prose. The second minor criticism has to do with the manner in which British casualties are detailed. This was a limited conflict, with the British suffering 253 personnel killed in action. The appendices of Volume II are quite detailed, as is the text, providing information on when and where most of the major losses occurred. However, the manner in which the author deals with naming the dead is inconsistent. In some cases, mostly with aircrew, the names of the dead are linked to the specific incident in which they were killed. This is also the case with some of those killed aboard vessels of the British task force. For the most part though, this is not the case with those killed during land operations. Given the relatively small number of casualties, it would seem appropriate for the names of the dead to be linked to the specific actions where they were killed, despite the fact that this information can be found in other published sources. This is done for some, but not all, and tends to occur when it is relatively easy (for example, when an aircraft was lost). This could be accomplished in the endnotes to avoid belabouring the text. If nothing else, all of the dead should be treated equally, for they were all equal in the extent of their sacrifice, so a bit of consistency on this point is desired. However, this is not to suggest any ill-intent by the author, and the fact remains that the names of all those killed, civilian and military, are listed alphabetically in the appendices.

All told, these volumes are a valuable addition to the bookshelf of those who read this journal. While the price for the two paperback volumes equals somewhere around C$120 (the hardback version comes in around C$300), the information in this revised and updated edition is well worth the price. Freedman is to be commended for accomplishing a daunting task so well.



OKA: A CONVERGENCE OF CULTURES AND THE CANADIAN FORCES

BIBLIOGRAPHICAL INFORMATION:

WINEGARD, Timothy C. Kingston: Canadian Defence Academy Press, 2008, paperback, 309 pages, $8.00, ISBN: 978-1100101088

Reviewed by Captain Thomas E. K. Fitzgerald[1]

Recently, a Canadian history magazine published what a panel of experts considered the most significant Canadian photographs of the past century. Included in that group of iconic photographs was Shaney Komulainen's picture of Private Patrick Cloutier of R22eR and Mohawk Warrior Brad "Freddy Kruger" Larocque in a nose-to-nose confrontation during the Oka Crisis of 1990. This picture,[2] perhaps more than any other, came to epitomize the clash between Aboriginal and non-Aboriginal cultures so vividly and astutely analysed in Timothy Winegard's *Oka: A Convergence of Culture and the Canadian Forces*.

The Oka Crisis was the violent culmination of a long-standing land dispute (or series of disputes) between the town of Oka and the Mohawk community of Kanesatake. The dispute had its roots in the eighteenth century when the governor of New France granted certain lands that were traditional Iroquois Confederacy hunting grounds to the Seminary of St. Sulpice (Lake Of Two Mountains). The lands in question were to be held, ostensibly, in trust for the Aboriginal communities for religious education but, in truth, were considered a defensive bulwark against English expansion. Gradually, with the defeat of the French and the eventual return of the Sulpician Order to France, the lands were sold to private owners causing a series of, sometimes violent, confrontations between the Mohawks and various levels of governments. By 1990, Canadian Aboriginal communities were seething over the federal government's inability or unwillingness to settle or even to discuss a number of outstanding land claims. The spark which ignited this powder keg was the unilateral decision by the municipality of Oka to expand a nine hole golf course onto a piece of property ("the Pines") which the Mohawks considered a sacred traditional cemetery. In response, the Mohawk community commenced erecting barricades. The community of Oka requested the Sûreté du Québec (SQ) to assist in the removal of the barricades. A violent confrontation resulted in the death of Corporal Marcel Lemay (SQ). A futile attempt to defuse the situation by requesting the assistance of the Royal Canadian Mounted Police also proved unsuccessful. On August 6, 1990 the Province of Quebec issued a requisition for the assistance of the Canadian Forces (CF), pursuant to the *National Defence Act (Can.)* s. 277 to "repress the troubles which subsist at the moment in Oka and Kanawake to secure the protection of works, public and private, which were essential to the general welfare and the security of the population of Quebec." Operation SALON was initiated.

In *Oka*, Winegard, a doctoral student and Canadian armour reserve officer, provides a comprehensive and highly readable account of the historical roots of the crisis, the immediate events which lead to the erection of the barricades and the occupation of the Mercier bridge as well as the political and military response which followed. Relying on private interviews, official records and military documents to which access had previously been denied, Winegard provides a fascinating, objective, almost hour-by-hour narrative of a time in Canadian history where the tranquillity of the nation hung in the balance.

Oka deals evenly with a number of themes which are as topical today as they were in 1990: the shabby treatment by the federal and provincial governments to long-standing Aboriginal concerns, the emergence of the Mohawk warrior society (first as an agency of legal community advocacy, eventually degenerating into a near illegal gang of thugs), to the inadequacy of Part XI of the *NDA* "Aid to the Civil Power." The lack of matérial, training and doctrine available to the CF during domestic military deployments is also analysed by the author who points to the complete absence of rules of engagement (ROE) as demonstrative of the unpreparedness of the CF. The role the media played during Operation SALON and the way it was managed by the senior military leadership is viewed as an example to emulate in future operations. Finally, the author writes passionately of the deep concern held by many Canadian citizens that the idea of Canadians confronting fellow Canadians with weapons in hand and in which lives on both sides of the barricade were at risk was a situation which had never occurred before and one which should never be permitted to happen again. Winegard writes about these matters with the objective eye of the historian and the keen sense of a military officer.

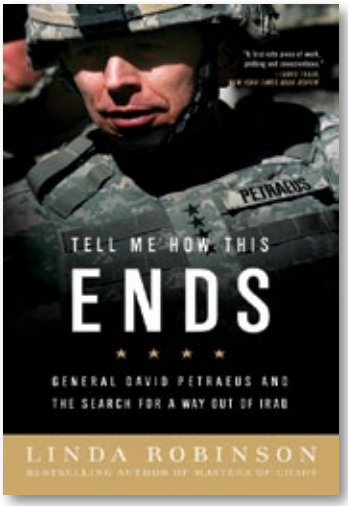
There are some villains in *Oka*, people seeking to turn the crisis into personal financial or political gain for example. There are many "good guys" who sought to keep events from spiralling out of control What comes clear in Winegard's narrative is that there existed many people on both sides of the barricade who were terrified that events would escalate and many more people would be injured or killed. What is also clear is that, notwithstanding its inexperience in hostile domestic operations, the senior leadership of the CF instituted many practices, "learned lessons," which continue to this day: regular communication with the local population of military intent and concept of operations, enforced discipline of its members who act illegally or inappropriately and an emphasis on individual professionalism while conducting a dangerous operation against an oft time provocative opponent to name a few.

Winegard concludes that while there may exist cause for optimism that the violence of Oka will not be repeated, recent events at Caledonia and Tyendinaga demonstrate that the potential for a repetition is not far away. More must be done to convince both Aboriginal and non-Aboriginal communities that the erection of barricades and the violence it engenders are not the means to negotiate long-standing issues: "The convergence of cultures must be mutually beneficial for both Canada and its indigenous Peoples."

Oka is an important contribution to understanding the importance Aboriginal Peoples have played in Canadian history. It is also important as it analyses the mechanics of a military domestic operation where violent confrontation may occur. It is finally important because it again exemplifies that when faced with a difficult situation, even one involving its fellow citizens, the CF, from private to chief of defence staff, rises to the challenge eventually earning the respect and admiration of an entire nation.

ENDNOTES

1. The author is indebted to Nancy Cada, an Anishinabe-Kwe of the Bear Clan, from the Anishnabe Territory for her review and comments of an earlier draft of this review.
2. Private Cloutier's fame quickly turned to notoriety with incidents of drug dealing and other criminal offences. He left the CF shortly thereafter. In an ironic twist of fate, both Larocque and Komulainen died on the same day.



TELL ME HOW THIS ENDS: GENERAL DAVID PETRAEUS AND THE SEARCH FOR A WAY OUT OF IRAQ

BIBLIOGRAPHICAL INFORMATION:

ROBINSON, Linda. New York: Public Affairs, 2008, hardcover, 432 pages, $29.95,

ISBN: 978-1586485283

Reviewed by Captain Thomas E. K. Fitzgerald

It is often very difficult to switch military doctrine in mid war. Fredrick the Great did it during the Seven Year's War (1756–1763), General Ulyssess Grant was successful in switching the Union army from a defensive posture to an all out offensive role and General Abrams, in the latter days of the Vietnam War, developed the "hearts and mind" strategy, a doctrine clearly different from the previous "search and destroy" philosophy. The reluctance to adopt military tactics to fit newly, developing situations results from several, usually overlapping, situations: an inability, usually at the highest levels, to recognize doctrinal failure; the absence of training, equipment, personnel and technology to prosecute the new doctrine; unfamiliarity or inexperience with this new war fighting strategy and tactics; and reluctance to enter into a form of warfare often characterized as a quagmire given its traditional longevity.

Linda Robinson's Tell Me How This Ends: General Petraeus and the Search for a Way Out of Iraq analyses how the 2007 "surge" in Iraq moved the US Army's military doctrine from fighting a conventional war by conventional means of movement and mass fire to a counter-insurgency (COIN) posture of fighting with economy of fire and "battle by battalion" tactics.[1] Robinson, a veteran war correspondent for U.S. News & World Report and noted author[2] writes that by 2005, Iraq had moved into a state of quasi civil war where civilian and military casualties caused by sectarian violence were rapidly increasing and where districts of Baghdad were virtual ghost towns. In effect, the American political (de-Ba athification, disbanding the Iraqi Army) and military (draw down) strategies were not working. In late 2006, two separate "strategy reviews" were conducted, one by the National Security Counsel (NSC) the other by the Chairman of the Joint Chiefs of Staff (JSC) and both, independently of one another, advocated a "go long" strategy—the so-called surge was born—and with it a rebirth of an American war fighting doctrine.

Enter the protagonists of Tell Me How This Ends, Ryan Crocker, the new American ambassador in Baghdad and Lieutenant General David Petraeus, commander of the Multi National Force–Iraq (MNF–I) who realized the war in Iraq was not a conventional war fought by conventional means where "victory" was measured in body counts or in territory seized and held but in securing and separating the Iraqi populations from the insurgents—removing the water from the fish. In counter-insurgency, the battlefield is viewed as being human, not territorial. Following classical COIN principles, Robinson recounts how Petraeus and Crocker used a variety of methods to reduce dramatically the sectarian violence in Baghdad including positioning military units in Iraqi communities to provide security and to build relationships; developing "gated communities" and "hardening" soft targets to control access to these areas thereby limiting their use as targets; encouraging the training of the Iraqi police (Operation Blue Shield) and military into professional, non partisan forces; co-opting so-called "accidentals" i.e., reconcilable Sunni and Shiite groups (including Al-Qaeda elements) into legitimate, supportive allies; and creating and supporting local community leaders. What Crocker and Petraeus realized, and their predecessors had not, was that the only way an insurgency succeeded was if it, at best, had the support of the population or, at worst, its indifference. To defeat an insurgency, insurgents have to be marginalized and made irrelevant to the population.[3] This was the heart and soul of the American strategy.

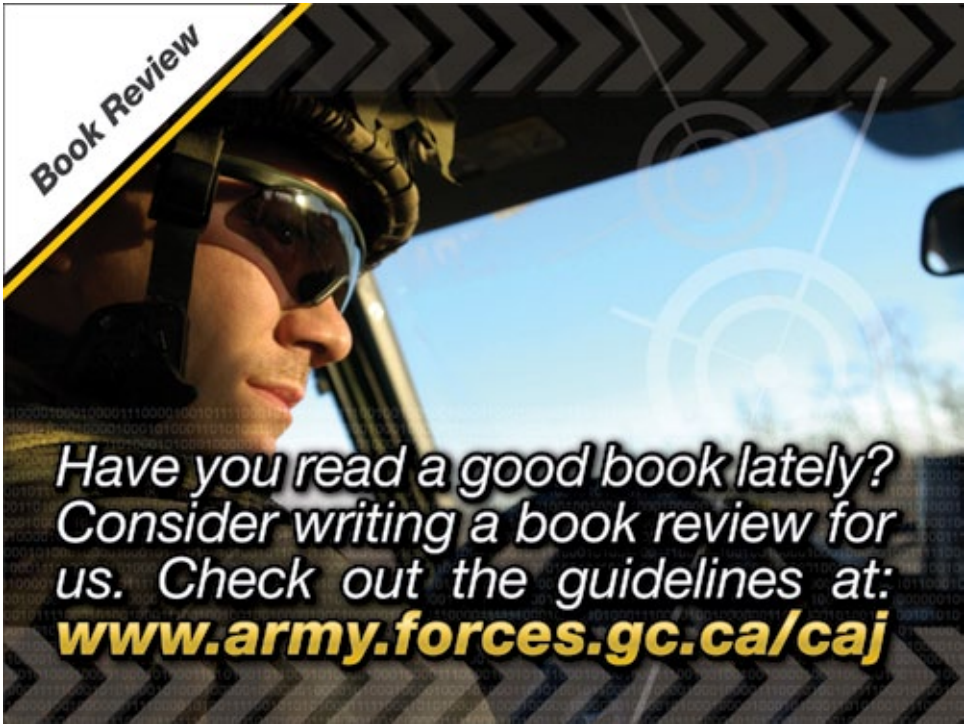
To be sure, this was not some kindly, weak-kneed, soft-hearted approach to war. As Robinson points out, the American strategy was always backed up with a conventional, urban war-fighting dimension. In 2007, a series of major operations were undertaken which targeted terrorist and extremist leaders. The experience of the 1st Battalion, 26 Infantry Regiment (I-26), the "Blue Spaders," demonstrated that the velvet glove of COIN must always contain an iron fist. Over almost its entire tour, the Blue Spaders were involved in a series of bloody engagements in Adhamiya, a district of Baghdad. In meticulous detail, Robinson writes of the valour, dedication and professionalism of individuals and groups during this bloody "inferno." In the end, it fell to the ordinary soldier to live, or to die, whatever type of war they were fighting. As it was for the soldiers of the 1st Battalion, 5th Calvary Regiment (1–5) who, notwithstanding having suffered grave losses during their deployment in Ameriya, assisted a local Sheikh in forcibly ejecting al-Qaida fighters who had kidnapped two Ameriyans and were holed up in a local mosque. One-time enemies had now become allies. Such a state would not have happened had the American commander not built personal relationships based on trust and respect with the local leaders. The incidents in Admomiya and Ameriya clearly demonstrate that securing the local population is key in defeating an insurgency. Once the counter-insurgent manages to disassociate the population from the insurgent, to control it physically, to receive its support, the insurgent has lost; for, in the final analysis, the acquisition and maintenance of governance depends on the tacit or explicit approval of the population.

The success of the "surge" policy probably would not have been possible without LGen Petraeus. He is the central character in Tell Me How This Ends.[4] He is the driven "super achiever," the perfectionist who took on all the toughest training assignments including being instrumental in drafting the US Army and Marine Corps Field Manual Counterinsurgency (3–24) in 2006.[5] That manual recommended a multifaceted approach to COIN rather than relying exclusively or, even principally, on military operations. It is from this beginning that Robinson reasons the surge strategy sprang.

Tell Me How This Ends is a first-rate, informative, well-written book. It tells the story of a military not only at war with the enemy but also with itself. It takes the reader from the corridors of power in Washington to the deadly streets of Baghdad. It is, at the same time, objective, analytical, vivid and poignant when dealing with the practical application and human dimensions of COIN strategy and tactics. Asymmetrical warfare will remain a feature of military doctrine for decades to come. It remains to be seen what success this new strategy will be for Iraq and for that reason no one knows how this ends.

ENDNOTES

1. The war in Iraq has seen a veritable explosion of books, describing the theory and practice of counter-insurgency warfare: David Kullen, *The Accidental Guerilla* (Oxford: Oxford University Press, 2009) and Thomas E. Ricks, *The Gamble* (New York: Penguin Press, 2009). Other classical works require re-reading, including, David Galula, *Counter Insurgency Warfare: Theory and Practice* (Westport: Praeger Security International, 2006); John A. Nagl, *Learning to Eat Soup with a Knife* (Chicago: The University of Chicago Press, 2006); Robert Thompson, *Defeating Communist Insurgency: Experiences from Malaya and Vietnam* (London: Chatto and Windus, 1966). For a practical application of counter insurgency principles, see, Col David H. Hackworth (U.S. Army (Ret)), *About Face: The Odyssey of an American Warrior* (New York: Simon and Schuster, 1989).
2. *Masters of Chaos: The Secret History of the Special Forces* (New York: Public Affairs, 2004).
3. The institutional opposition to COIN warfare is difficult to fathom given the US Army's experience in the Philippines after the Spanish-American War (1900) and the Vietnam War: see Nagal, p. 46–47. The reason for the military's intransigence in this area, if one extrapolates Nagl's theory and applies it to Iraq, is that the US Army had ceased to be a "learning organization."
4. The title of the book is taken from a question often asked by LGen Petraeus (then MGen Petraeus, commander of the 101 Airborne Division) of embedded journalists during the drive to Baghdad in 2003 chronicled in Rick Atkinson's *In the Company of Soldiers* (New York: Henry Holt and Company, 2004).
5. *Counter Insurgency Field Manual* (Chicago: The University of Chicago Press, 2007).



ALSO RECEIVED BY THE *CANADIAN ARMY JOURNAL*

ITALIAN BLACKSHIRT: 1935–45

CROCIANI, P. and BATTISTELLI, P.P. Oxford: Osprey Publishing, 2009, 64 pages, $22,
ISBN: 978-1-84603-505-0

Shortly after his rise to power in October 1933, Mussolini transformed the 'action squads' of the Fascist party into a national militia. The paramilitaries—the Blackshirts—were raised in 1928, and fought in both conventional and counterinsurgency operations. Blackshirts fought against the Senussi tribes in Ethiopia and—unofficially—for Franco during the Spanish Civil War, where thousands were killed. When Italy entered the Second World War the Blackshirt legions fought on the Eastern Front as well as in Greece and North Africa. Number 144 in the Osprey *Warrior* series.

THE HOME GUARD

STOREY, Neil, R. Oxford: Shire Publishing, 2009, 56 pages, $14.95,
ISBN: 978-0-74780-751-3

In spring 1940 Hitler unleashed his blitzkrieg, and as British forces fell back to Dunkirk Britain was in imminent danger. Anthony Eden, Secretary of State for War, made a radio appeal on 14 May 1940 for men, "who were for one reason or another not at present engaged in military service, and who wish to do something for the defence of their country," to join a new force named the Local Defence Volunteers. Churchill would later rename this force the Home Guard. Neil. R. Storey tells how the men of Britain answered the call in thousands, and how their training and equipment were improved from their very basic, even improvised, levels, to turn them into a well-honed defence force.

MAGINOT LINE 1940: BATTLES ON THE FRENCH FRONTIER

ROMANYCH, M. and RUPP, M. Oxford: Osprey Publishing, 2009, 96 pages, $22.95,
ISBN: 978-1-84603-499-2

Constructed during the 1930s, the Maginot Line was supposed to form the ultimate defence against a German invasion of France. But the strength of the Line varied widely, and during the assault on France in May 1940 the Germans were able to identify its weak points and focus their attacks against them. While the invading army was able to smash through the lightly defended section along the river Meuse, at other points the Line held. Although the Maginot Line was to prove a strategic failure, the stiff resistance put up by some of the fortresses was a testament to the fighting ability of the French Army. This is the story of the seven major German operations launched against the Maginot Line, and the defiant fight put up by this most famous of fortifications. Number 218 in the Osprey *Campaign* series.

THE COCKLESHELL RAID: BORDEAUX 1942

FORD, Ken. Oxford: Osprey Publishing, 2010, 64 pages, $22,
ISBN: 978-1-84603-693-4

On the night of 7 December, 1942, five canoes were launched off the mouth of the Gironde River, each containing a pair of British commandos tasked with slipping into the port of Bordeaux and destroying as many of the merchant ships docked there as possible. Only two of the canoes made it to the target, but it was enough. Five enemy ships were badly damaged in the attack. It then became a game of cat and mouse for the surviving commandos in their attempt to get back to Britain. Some of the men made it to Gibraltar; others were caught and executed. Author Ken Ford gives a blow-by-blow account of one of the most daring raids of World War II, which badly upset the flow of materiel into Germany, and which gave the British public a much-needed victory to celebrate. Number 8 in the Osprey *Raid* series.

P-38 LIGHTNING VS KI-61 TONY: NEW GUINEA 1943-44

NIJBOER, Donald. Oxford: Osprey Publishing, 2010, 80 pages, $19.95,
ISBN: 978-1-84603-943-0

With its distinctive twin-tailed design, the P-38 was one of the most recognizable fighter aircraft of World War II. It was also one of the best. The perfect balance of speed, firepower and range, it made a formidable opponent during the crucial battles for the Solomon Islands and New Guinea. In response, the Japanese worked with the Germans to develop the Ki-61, a heavy air-superiority fighter with an impressive array of firepower. In head-to-head match-ups, the P-38 proved the superior fighter, but individual duels often came down to the ability and experience of the pilots involved. This book recreates these fast, deadly duels in the skies of the Pacific through dramatic artwork, technical analysis, and first-hand accounts. Number 26 in the Osprey *Duel* series.

VF-11/111 'SUNDOWNERS': 1942–1995

TILLMAN, Barret, with van der LUGT, Henk. Oxford: Osprey Publishing, 2010, 128 pages, $30,
ISBN: 978-1-84603-484-8

Fighting Squadron 11 was established at San Diego in August 1942, beginning a half-century record that spanned aerial combat in three wars from the piston to the jet age. Earning its battle spurs at Guadalcanal in Wildcats, the 'Sundowners' transitioned to Hellcats in 1944 and saw further action from USS Hornet (CV-12). Redesignated VF-111 in 1948, the unit converted to F9F Panthers and scored history's first jet-versus-jet victory over Korea in 1950. FJ-3 Furies and F11F Tigers followed, before VF-111 received the world-class F8U Crusader in 1961. During the Vietnam War, the 'Sundowners' logged six deployments, scoring MiG kills in F-8s and F-4 Phantom IIs. From 1978 to disbandment in 1995, VF-111 flew F-14 Tomcats from USS Kitty Hawk (CV-63) and Carl Vinson (CVN-70), completing 37 deployments from 17 'flat-tops' in its 52-year career. Number 36 in Osprey's *Aviation Elite Unit* series.

DUNKIRK 1940: OPERATION DYNAMO

DILDY, Douglas C. Oxford: Osprey Publishing, 2010, 96 pages, $22.95,
ISBN: 978-1-84603-457-2

The evacuation of the British Expeditionary Force from the beaches of Dunkirk in May and June 1940 has achieved a fabled status in British military history. The nine-day struggle to decide the fate of trapped British and French forces saw fierce battles across air, land and sea, as the advancing Germans fought to overrun the Allied armies before they could be evacuated from the French coast. In the face of ferocious attack, the valiant efforts of the Royal Navy and civilian vessels saved the expeditionary force from annihilation and preserved the means for Great Britain to carry on the fight against Hitler's Germany. This comprehensive account of Operation DYNAMO is brought to life by archive photography, new maps and original artwork. Number 219 in Osprey's *Campaign* series.

FW 200 CONDOR VS ATLANTIC CONVOY

FORCZYK, Rogert. Oxford: Osprey Publishing, 2009, 80 pages, $19.95,
ISBN: 978-1-84603-917-1

After the fall of France in 1940, Germany attempted to strangle Britain into submission by attacking the Atlantic Convoys, which brought much-needed supplies and war materiel from the USA and Canada. While the U-boats attacked from beneath the seas, the Germans converted a civilian airliner design into the Fw 200 Condor and attacked from the skies. By the summer of 1941, Condor attacks had been so successful that Winston Churchill called them "the scourge of the Atlantic." This book discusses the development of the Condor, and analyzes the various Allied responses, from arming civilian vessels and providing Royal Navy escorts, to Grumman Martlets and Sea Hurricanes launched from catapults on modified merchant ships or from specially-designed carriers to meet this aerial threat.

RESCUING MUSSOLINI: GRAN SASSO 1943

FORCZYK, Robert. Oxford: Osprey Publishing, 2010, 64 pages, $22,
ISBN: 978-1-84603-462-6

The successful rescue of imprisoned Italian dictator Benito Mussolini from atop the Gran Sasso plateau was one of the most dramatic special forces operations in military history. Arrested by his own officers in July 1943, Mussolini had been whisked away to an isolated and well-defended mountaintop resort—the Hotel Campo Imperator—which could only be reached from a heavily-guarded cable car station. Hitler ordered General de Fallschirmtruppe Kurt Student to organize a rescue mission using his highly-trained fallschirmjager and, for political reasons, an SS detachment under Haupsturmfuhrer Otto Skorzeny. On 12 September 1943, Student's Fallschirmjager mounted a daring glider-borne assault, with the aim of surprising the Italian guards and securing Mussolini. Number 9 in Osprey's *Raid* series.

THE POLITICS OF COMMAND: LIEUTENANT-GENERAL A.G.L. MCNAUGHTON AND THE CANADIAN ARMY 1939–1943

RICKARD, John Nelson. Toronto: University of Toronto Press, 2010, 356 pages, $46.95,
ISBN: 978-1-4426-4002-3

In December 1943, Lieutenant-General A.G.L. McNaughton resigned from command of the First Canadian Army amid criticism of his poor generalship and his abrasive personality. Despite McNaughton's importance to the Canadian Army during the first four years of the Second World War, little has been written about the man himself or the circumstances of his resignation. The first full-length study of the subject since 1969 will redefine how all Canadians look not only at Andy McNaughton, but the Canadian Army as well.

KISS THE KIDS FOR DAD, DON'T FORGET TO WRITE: THE WARTIME LETTERS OF GEORGE TIMMINS, 1916–18

BENNETT, Y.A. (editor). Vancouver: UBC Press, 2010, 224 pages, $32.95,
ISBN: 978-0-7748-1609-0

Between 1916 and 1918, Lance-Corporal George Timmins, a British-born soldier who served in the Canadian Expeditionary Force, wrote faithfully to his wife, May, and their three children back home in Oshawa. Sixty-three letters and four fragments survived. Timmins' letters offer a rare glimpse into the experiences and relationships, at home and abroad, of a Canadian infantryman. Its story of quiet heroism and the brotherhood of the trenches will appeal to anyone interested in how ordinary soldiers experienced and survived the First World War.

FROM VICTORIA TO VLADIVOSTOK: CANADA'S SIBERIAN EXPEDITION, 1917–1919

ISITT, Benjamin. Vancouver: UBC Press, 2010, 352 pages, $29.95,
ISBN: 978-0-7748-1802-5

As the last guns sounded on the Western Front, 4,200 Canadian soldiers, some of them conscripts, travelled from Victoria to Vladivostok to open a new theatre of war in Siberia. Part of the Allied intervention in Russia's civil war, the force sought to defeat Bolshevism, but grim conditions, conflict among the Allies, and local opposition eventually forced Canada to evacuate its troops. Benjamin Isitt illuminates a forgotten chapter in the history of labour radicalism and the complex factors that have shaped foreign policy. The result is a highly readable and provocative work that challenges public memory of the First World War.

AN OFFICER AND A LADY: CANADIAN MILTARY NURSING AND THE SECOND WORLD WAR

TOMAN, Cynthia. Vancouver: UBC Press, 2010, 272 pages, $32.95,
ISBN: 978-0-7748-1-448-5

During the Second World War, more than 4,000 civilian nurses enlisted as Nursing Sisters, a specially created all-female officer branch of the Canadian military. They served in all three armed forces branches and all the major theatres of war, yet nursing as a form of war work has long been under-explored. *An Officer and a Lady* analyzes how gender, war, and medical technology intersected to create a legitimate role for women in the masculine environment of the military, and the expectations placed on military nurses as "officers and ladies."

CANADA, THE CONGO CRISIS, AND UN PEACEKEEPING, 1960–64

SPOONER, Kevin, A. Vancouver: UBC Press, 2010, 296 pages, $32.95,
ISBN: 978-0-7748-1-637-3

In 1960 the Republic of Congo teetered near collapse as its first government struggled to cope with civil unrest and mutinous armed forces. When the UN established what would become the largest peacekeeping operation of the Cold War, the Canadian government faced a difficult decision. Should it support the intervention? This book offers one of the first detailed accounts of Canada's involvement in UN peacekeeping. It will appeal to those interested in Canadian foreign policy and relations with Africa in particular, and the Congo crisis and United Nations peacekeeping more generally.

PEARSON'S PEACEKEEPERS: CANADA AND THE UNITED NATIONS EMERGENCY FORCE 1956–67

CARROLL, Michael K. Vancouver: UBC Press, 2010, 254 pages, $29.95,
ISBN: 978-0-7748-1582-6

In 1957, Lester Pearson won the Nobel Peace Prize for creating the United Nations Emergency Force during the Suez Crisis. The award established Canada's reputation as a peacekeeping nation, but it also launched a national love affair with peacekeeping that has obscured more complex historic realities. *Pearson's Peacekeepers* explores the reality behind the rhetoric by offering a comprehensive account of the UN's first major peacekeeping operation. By offering a nuanced account of Canada's participation in UNEF, this book challenges perceived notions of Canada's past and will help students, policy-makers, and concerned citizens to evaluate more accurately international peacekeeping efforts in the present.

CREATING POSTWAR CANADA: COMMUNITY, DIVERSITY, AND DISSENT, 1945-75

FAHRNI, Magda, and RUTHERDALE, Robert (editors). Vancouver: UBC Press, 2010, 360 pages, $34.95,
ISBN: 978-0-7748-1384-6

Postwar Canada was far more complex than the well-worn stereotypes of Cold War conformity and 1960s rebellion suggest. Various parts of the country experienced nationalist awakenings; a baby boom was accompanied by increased immigration and an expanding labour force; women were demanding access to birth control; and Canada was rethinking its relationship with the United States. *Creating Postwar Canada 1945–75* showcases new research on this period, exploring postwar Canada's diverse symbols and battlegrounds.

RENEGADES: CANADIANS IN THE SPANISH CIVIL WAR

PETROU, Michael. Vancouver: UBC Press, 2010, 304 pages, $24.95,
ISBN: 978-0-7748-1418-8

Between 1936 and 1939, almost 1,700 Canadians defied their government and volunteered to fight the Spanish Civil War. They chose to leave behind punishing lives in Canadian relief camps, mines and urban flophouses to confront fascism in a country few knew much about. Four hundred died there. Michael Petrou has drawn on recently declassified archival material, interviewed surviving Canadian veterans, and visited the battlefields of Spain to write the definitive account of Canadians in the Spanish Civil War, and how the Canadian government and the Royal Canadian Mounted Police reacted to their decision to join illegally in another country's war.

THE POLITICS OF PROCUREMENT: MILITARY ACQUISITION IN CANADA AND THE SEA KING HELICOPTER

PLAMONDON, Aaron. Vancouver: UBC Press, 2010, 288 pages, $32.95,
ISBN: 978-0-7748-1715-8

In 1993, Canada's Liberal Party cancelled an order to replace the Sea King maritime helicopter. The Liberals claimed the Tory plan was too expensive, but the cancellation itself actually cost taxpayers hundreds of millions of dollars. The incident drew public attention to the waste in Canada's defence spending and to the under-equipped state of its military. This fascinating saga of politics playing havoc with military procurements is for anyone interested in Canadian military history, civil-military relations, or the roles of the military and the government in weapons acquisition.

VETERANS WITH A VISION: CANADA'S WAR BLINDED IN PEACE AND WAR

DURFLINGER, Serge. Vancouver: UBC Press, 2010, 484 pages, $29.95,
ISBN: 978-0-7748-1856-8

We know something about our war dead but almost nothing about our war wounded. Veterans with a Vision provides a vibrant, poignant, and very human history of Canada's war blinded veterans and of the organization they founded in 1922, the Sir Arthur Pearson Association of War Blinded. Serge Durflinger details the veterans' process of civil re-establishment, physical and psychological rehabilitation, and social and personal coping, and describes their public advocacy for government pension entitlements, job retraining, and other social programs.

CRISIS OF CONSCIENCE: CONSCIENTIOUS OBJECTION IN CANADA DURING THE FIRST WORLD WAR

SHAW, Amy J. Vancouver: UBC Press, 2010 264 pages, $32.95,
ISBN: 978-0-7748-1593-2

The First World War's appalling death toll and the need for a sense of equality of sacrifice on the home front led to Canada's first experience of overseas conscription. While historians have focused on resistance to enforced military service in Quebec, this has obscured the important role of those who saw military service as incompatible with their religious or ethical beliefs. *Crisis of Conscience* is the first book about the Canadian pacifists who refused to fight in the Great War. The experience of these conscientious objectors offers insight into evolving attitudes about the rights and responsibilities of citizenship during a key period of Canadian nation building.

OPERATION NORWIND 1945: HITLER'S LAST OFFENSIVE IN THE WEST

ZALOGA, Steven J. Oxford: Osprey Publishing, 2010, 96 pages, $22.95,
ISBN: 978-1-84603-683-5

In the waning days of the Battle of the Bulge, Hitler ordered a second offensive against US and French forces in Alsace. Codenamed NORWIND (North Wind), the attack was intended to exploit the heavy diversion of Allied forces into Belgium. The New Year's Eve offensive nearly led to the recapture of the provincial capital of Strasbourg, provoking bitter arguments between senior US and French commanders. Following a month of brutal winter fighting, the Allies gradually overcame the German assault force and regained the lost cities and towns of Alsace. Number 223 in Osprey's *Campaign* series.

WORLD WAR II BATTLEFIELD COMMUNICATIONS

ROTTMAN, Gordon L. Oxford: Osprey Publishing, 2010, 64 pages, $22,
ISBN: 978-1-84603-847-1

The development of practical, man-portable radio sets for communication between companies and battalion headquarters, and later between platoons and companies, was central to the character of World War II infantry fighting. It enabled units to employ flexible, coordinated tactics, allowing their commanders to exploit success, call in supporting fire, or limit the cost of failure. This concise guide to a vital aspect of World War II tactics explains the equipment and practice of the US, British, Soviet, German and Japanese armies. Number 181 in Osprey's *Elite* series.

CLEARING THE WAY: COMBAT ENGINEERS IN KANDAHAR, 23 FIELD SQUADRON

GASPAROTTO, Major Mark. Ottawa: Self-published, 2010, 346 pages, $20,
ISBN: 978-1926582-59-7

This is the story of the men and women of 23 Field Squadron during Op ARCHER Roto 2, comprising soldiers, sailors and airmen drawn from across the Canadian Forces and beyond. The intent of this book is to mesh their very personal stories with the Squadron War Diary, all within the framework of the overall 1 RCR Battle Group mission. This mission was accomplished by the explosive ordnance disposal (EOD) operators, heavy equipment operators, armoured engineers, geomatic technicians, combat engineers, and various support and headquarters staff that were 23 Field Squadron.

BUSH WARFARE

In the Victorian Era, many young talented Canadians graduating from the Royal Military college of Canada went on to serve in the British Army. William Charles Gifford Heneker, from Sherbrooke, Quebec, was one of them. Between 1896 and 1906 Heneker served in more than a dozen African campaigns ranging from peacetime military engagements to major combat operations. As a tactical commander, Henniker demonstrated considerable talent and skill, and in 1907, he preserved his strategic and tactical ideas on fighting small wars and counterinsurgency (Bush Wars) in this book for future commanders to consider.

Source: Combat Camera

Source: Combat Camera

REINVIGORATING INTELLIGENCE PREPARATION OF THE BATTLEFIELD WITHOUT REINVENTING THE WHEEL

Captain O.A.J. Savage, CD

> *Success in future conflict, especially against adaptive and agile adversaries, will require a shift away from kinetic to influence activity, underpinned by a greater understanding of the enemy. This understanding will require more emphasis on intelligence gathering, cultural awareness, individual and collective training, and focused comprehensive approaches.*[1]

INTRODUCTION

Dogmatic adherence to doctrine is an often-used term that carries both positive and negative implications. Doctrine is what allows the military to "soldier on" and ensures the army does not go astray, as it moves methodically and purposefully along an axis. Depending on the doctrine, it can be both limiting and liberating for commanders. However, when doctrine does not keep pace with the lessons learned and new methodologies, it becomes a burden and causes the military to falter, as it attempts to fill the gap with modified procedures, adopted doctrine or new and inventive approaches to a problem.

As the Canadian Forces have been struggling to understand the counter-insurgency (COIN) environment, it has become increasingly important to examine our doctrine and, where necessary, to improve it, in particular the role and capabilities of intelligence within the Army. One aspect that has been identified as an issue is the limitations of the intelligence preparation of the battlefield (IPB) process in defining the population, or human terrain. As Major Dominic Goulet notes in a recent article:

> *The traditional IPB model fails to provide for an effective approach to an understanding of the people's chief vulnerabilities and grievances, and how the insurgency may exploit these. Furthermore, COIN doctrinal and theoretical constructs that do much to provide popular buzz words [sic] and catch phrases, prove frustrating without any tangible means for application.*[2]

In order to foster further discussion, this paper presents two methods to enhance current IPB doctrine: one, a modification of the traditional IPB similar to that found in US Army / Marine Corps COIN Center's IPB model. Two, the adoption and adaptation of the Conflict Prevention and Post-Conflict Reconstruction (CPR) Network's *Early Warning & Early Response Handbook*.

IPB

IPB was introduced in the US Army intelligence estimate during the cold war.[3] It was developed to support staff estimates and military decision making. It is defined in Canadian Army doctrine as:

> *a continuous and systematic process of analysing the adversary with existing weather and terrain conditions within a specific geographic environment within the guidelines and tempo of the Operational Planning Process.*[4]

In other words, IPB is a method to understand the enemy and the ground within the context of the operational environment. Lieutenant-Colonel Daniel Villeneuve concludes in "Guessing What is on the Other Side of the Hill: A Review of Canada's Experience with IPB," that

> *[t]here is no questioning the value of the IPB process. When implemented under the circumstances for which it was designed to operate, the process provides the intelligence staff with an efficient step-by-step methodology that allows it to successfully support a commander's decision-making process.*

But the environment under which IPB was designed to function has changed considerably since the end of the [c]old [w]ar. It is now time for the Canadian Forces to take the next step and to adjust the IPB process in order to better support its intelligence requirements.[5]

Designed to "expedite the conduct of the intelligence estimate by using a very systematic process, in order to develop graphic outputs that are easier to assimilate,"[6] IPB is conducted in four distinct steps:

1. Define the battlefield environment.
2. Describe the battlefield effects.
3. Evaluate the adversary.
4. Determine the adversary courses of action.[7]

Although the Army *Intelligence Field Manual* includes population demographics, religious, political and socio-economic factors in IPB step 1, the focus in practice has been the examination of the physical terrain. Further, the tools and discussion in IPB step 2 are centred on the physical terrain and weather. As a result, there has not been the required emphasis placed on the analysis of human terrain needed for the COIN environment, both when defining the battlefield and describing its effects. Outlined below are two methods that if applied within the context of IPB could enhance the process and provide the tools needed when operating in environments heavily influenced by population dynamics.

METHOD 1—PMESII AND ASCOPE

In the article, "Linking Doctrine to Action: A New COIN Center-of-Gravity Analysis," Mansoor and Ulrich suggest using the acronym ASCOPE, which stands for: area, structures, capabilities, organizations, people, events, "to identify the links between the physical environment and the people."[8] Another acronym often used to help identify the human environment is PMESII, which stands for: political, military/security, economic, social, infrastructure and information. PMESII is primarily used to define the human systems of the adversary's state. In order to fully understand and define the population, the two acronyms can be used in combination to create a matrix to develop a framework for analysis.[9] This matrix is accomplished by using the simple table depicted in Table 1.1.

PMESII / ASCOPE	Political	Military/ Security	Economic	Social	Infra-structure	Information
Area	• Political and Tribal boundaries • Government centres	• Military Centres • Police centres	• Agricultural, mining, labour regions • Trade routes	• Social enclaves • Religious boundaries	• Temporary settlements for IDPs	1. •
Structures	2. •	3. •	4. •	5. •	6. •	7. •
Capabilities (SWEAT-MS)[10]	8. •	9. •	10. •	11. •	12. •	13. •
Organizations	14. •	15. •	16. •	17. •	18. •	19. •
People	20. •	21. •	22. •	23. •	24. •	25. •
Events	26. •	27. •	28. •	29. •	30. •	31. •

Table 1.1—PEMSII and ASCOPE

The information can then be placed graphically over the conventional terrain analysis. By using each part of ASCOPE as a layer, seven overlays are created for reference and analysis.[11] However, the real product is the information and understanding created by the process of building the table.

METHOD TWO—THE CONFLICT DIAGNOSTIC FRAMEWORK

Through the work of a number of agencies, the Conflict Prevention and Post-Conflict Reconstruction Network developed a handbook "to facilitate the design of a Conflict Diagnostic Framework."[12]Although the handbook was intended for development practitioners, it can be easily adapted to further develop the human terrain in steps 2 and 3 of IPB (describe the environment and evaluate the threat).

By assessing both conflict and peace factors and analysing the stakeholders connected to the area of operation, a greater understanding of the threat environment can be developed. This can then be used to develop likely threat templates by understanding strategic and operational choices and defining entry points for the enemy. The framework spans both IPB 2 and 3 and can be presented in a single table or incorporated into traditional IPB products.

The *Early Warning & Early Response Handbook* divides the process into seven steps, but it is steps 2 through 5 that are crucial to the IPB process. The first step is the summarization or product of steps 2 through 6 and should be viewed as the completion of the entire process rather than a step within it. Steps 6 and 7 (Strategic Issues and Choices and Peacebuilding Recommendations) are the development of operations and strategies that could be used to solve the identified issues. Although these steps may be useful within the operational planning process, they are not applicable within the context of IPB. This leaves four key steps: Conflict Analysis, Peace Analysis, Stakeholder Profile and Scenarios and Objectives.

The Conflict Analysis step aims to "understand the history of tensions in the community, their causes, and what fuels them; to identify the priority issues (root causes) of the tensions and identify the priorities for action."[13] To do this the handbook provides the following definitions:

1. **Manifestations**: Easily identifiable occurrences (what you see) that indicate unrest in the society.
2. **Proximate Causes**: Factors that accentuate and make more severe the underlying causes of conflict. They can support or create the conditions for violent conflict, and are time-wise closer to the outbreak of armed violence. They may change over time.
3. **Root Causes**: Structural or underlying causes of conflict. [These alone are] not sufficient causes of *violence*, and are mostly static, changing slowly over time.
4. **Conflict Synergies**: There is no single cause of a conflict. Factors vary in importance and can reinforce each other. Conflict analysis must involve assessing the relative importance of various conflict factors and their interrelationship. The combined effect of conflict factors produces an effect that enhances or reinforces the effect of individual conflict factors.[14]

The intent is to "identify a manifestation of tensions," "then burrow down through proximate and root causes."[15] This process is repeated "until sufficient information is available to get a broad overview of the context of tensions in the community."[16] "[A]s reinforcing relationships become apparent,"[17] then one can identify the synergies. However, one must ensure that they are looking at the issues through the appropriate lens of the culture and society that is being examined.

The Peace Analysis step aims to understand what factors can contribute to a sustained peace, reduce the incidence of violence or prevent the outbreak of violent conflict. It uses the following definitions:

1. **Ongoing Peace Efforts**: Easily identifiable manifestations or occurrences that indicate that non-violent solutions are being sought.
2. **Peace Structures and Processes in Place**: Structures or processes in place for dealing with unrest or violence, and sustaining peace … mechanisms put in place specifically for dealing with the conflict … or systemic supports that uphold peace or reduce the "conflict carrying capacity" of society.
3. **Peacebuilding Gaps**: Regional or international political, economic, social, and security initiatives requiring attention to sustain peace that are not currently being undertaken either from domestic or external actors.
4. **Peacebuilding Synergies**: There is no single precondition for sustainable peace. Factors vary in importance and can reinforce each other. Peace analysis must involve assessing the relative importance of the various peace efforts and opportunities and their interrelationships. The combined effect of a number of peace factors can produce an effect that enhances or reinforces the effect of individual peace factors. Paying attention to peace synergies may identify key targets for support in the pursuit of peace and conversely targets to undermine the peace.[18]

Similar to the Conflict Analysis step, one starts by identifying a manifestation of peace and then identifying whether there are processes or structures in place to support sustainable peace, or if gaps exist. This is repeated until sufficient information is available and synergies can be identified through reinforcing relationships. This will help identify likely insurgent activity and their courses of action, as many will be threats to their cause and possible targets.

The Stakeholder Profile step aims to understand the potential and actual motivations of various stakeholders and the actions they may take to further their respective interests. It uses the same methodology as the above two steps and the following definitions:

1. **Stakeholders**: Primary, secondary, and external parties to the conflict. These actors represent the groups and/or individuals with a stake in maintaining the conflict and/or building peace.
2. **Actions**: Easily identifiable manifestations or occurrences of efforts made / activities undertaken by various stakeholders to promote peace or conflict.
3. **Agendas/Needs**: The vested interests of key stakeholders in maintaining the conflict or working toward peace—opposing or overlapping requirements affected by the conflict or peace.
4. **Stakeholder Synergies**: Actors can vary in importance and reinforce each other. Stakeholder analysis should assess the relative importance of the various actors and interrelationships. The combined effect of stakeholders can produce an effect that enhances, or reinforces, the effect of individual actors. Synergies can exist without being consciously pursued. Paying attention to synergies between the actors may identify key targets for support or preventive action.[19]

Now that the base analysis is completed, the next step (and in this case final step) is Scenarios and Objectives. This step develops scenarios by assessing trends and patterns as well as weighing the conflict-indicator trends against peace-indicator and stakeholder trends. This step goes beyond simply stating what the *enemy's* most dangerous and most probable course of action is; it also identifies "what might trigger a change in the current situation"[20] and develops realistic objectives for engagement, to realize the optimal objectives and prevent worst-case scenarios.

CONCLUSION

These methodologies are not new, nor are they radically different from current Army doctrine; rather, they are simply the application of an existing systematic framework of analysis within the context of IPB. This not a silver bullet for conducting or improving IPB, but rather a return to rigorous analysis and the application of critical thought in identifying and solving a given problem or set of issues. The methodologies presented create the framework and, hopefully, help provide different paradigms, in order to foster critical thought in viewing the issues.

ENDNOTES

1. United Kingdom, Ministry of Defence, *Global Strategic Trends—Out to 2040* (Shrivenham: Development, Concepts and Doctrine Centre, 2010), p. 17
2. Dominic Goulet, "Intelligence Support to Counterinsurgency: Moving Beyond Weather, Enemy and Terrain," *Canadian Intelligence Branch Journal* (2009): p. 9.
3. Daniel Villeneuve, "Guessing What is on the Other Side of the Hill: A Review of Canada's Experience with IPB," (Toronto: Canadian Forces College Command and Staff Course Paper, 2005), p. 3.
4. Canada, Department of National Defence, B-GL-357-001/FP-001 *Intelligence Field Manual* (Ottawa: Department of National Defence, 2001), p. 70.
5. Villeneuve, p. 94.
6. Villeneuve, p. 3.
7. Canada, *Intelligence Field Manual*.
8. Peter R. Mansoor and Mark S. Ulrich, "Linking Doctrine to Action: A New COIN Center-of-Gravity Analysis," Military Review (September–October 2007): p. 46.
9. For a broader view, see Jorge Nef's *Human Security and Mutual Vulnerability*. Available at: http://www.idrc.ca/en/ev-9383-201-1-DO_TOPIC.html#begining (accessed September 8, 2010).
10. Acronym stands for: sewer, water, electricity, academics, trash, medical and security.
11. An example of an ASCOPE graphical layout can be found at: http://usacac.army.mil/cac2/coin/KC.asp, (accessed September 8, 2010).
12. Conflict Prevention and Post-Conflict Reconstruction Network, *Early Warning & Early Response Handbook*, Version 2.3, (September 2005) available at http://cpr.web.cern.ch/cpr/Library/tools/EW-HandbookFinalEN_v2.3.pdf (accessed February 11, 2010).
13. *Ibid.*
14. *Ibid.*
15. *Ibid.*
16. Ibid/
17. *Ibid.*
18. *Ibid.*
19. *Ibid.*
20. *Ibid.*

THE OPTIMIZED BATTLE GROUP: A CONTRADICTION IN TERMS?

Major D.R. Bobbitt, CD

It was with great interest that I read both the article in the Fall 2008 *Canadian Army Journal* by Majors Ruff and Godefroy on the Battle Group 2021 Study, "Forming Land Forces for the Army of Tomorrow—The Battle Group 2021 Study"[1] and the recently published *Toward Land Operations 2021: Studies in Support of the Army of Tomorrow Force Employment Concept*.[2] As an Army officer attending a foreign military course, it has been necessary for me to become familiar with Canadian doctrine and concepts in order to answer the questions of my course mates on how the Canadian Army operates. In addition to the above publications, this "coalition" education has required that I get to know *Land Operations 2021: The Force Employment Concept for Canada's Army of Tomorrow*.[3] Some reflection on these publications has led me to believe that the Canadian efforts at future force development are a little schizophrenic. On the one hand, *Land Operations 2021* recognizes the fact that land units and formations will have to be task tailored based on the mission and environment in order to operate effectively. On the other hand, much of the effort of the Battle Group 2021 Study appear, from my admittedly distant viewpoint, to be directed towards determining a fixed "optimal" battle group organization for both force generation and employment.

The aim of this short piece is to argue that Battle Group 2021 Study is attempting to answer the wrong questions, or perhaps more accurately is attempting to answer questions that are unanswerable. Based on the strategic context and operational demands laid out in *Land Operations 2021*, there is no such thing as a "fixed optimal" organization on the current or future battlefield.

Before making my arguments, a little background is in order to place them in context, or as my American course mates are so fond of saying to "frame the problem." Over the last decade, the Canadian Army has expended a great deal of energy and thought in an attempt to determine how best to organize and structure itself to meet the challenges of military operations in today's uncertain security environment and, more importantly, how to transform itself to meet the likely threats of the future. In 2007, the Canadian Army issued *Land Operations 2021: The Force Employment Concept for Canada's Army of Tomorrow* as its capstone guidance for development of the interim force. This document broadly outlines the likely characteristics of the future security environment and describes how Canada intends to conduct operations in this environment, providing a conceptual framework to guide ongoing land force development activities. *Land Operations 2021* outlines an approach to future land operations characterized by "the deliberate use of dispersion and aggregation undertaken by adaptive forces in order to create and sustain tactical advantage over adept, adaptive adversaries,"[4] known as adaptive dispersed operations or ADO.

Based on this guidance, the Canadian Army undertook a number of more detailed conceptual and doctrinal experiments, including a series of studies on various organizational models. The key component of these trials has been the Battle Group 2021 Study started in 2007, in which the 2nd Battalion, The Royal Canadian Regiment (2 RCR) was reorganized to include other combat arms subunits and specific coordination cells and enablers on a permanent vice task specific basis. (The aforementioned article by Majors Ruff and Godefroy provides an excellent overview of this ongoing trial.) In simple terms, the aim of this ongoing study is to determine what organization is best able to generate and employ units capable of performing the types of operations envisaged in *Land Force 2021*. Is it an "optimized" battle group where all of the subunits permanently reside within the same unit even during "normal" garrison routine? Or is it the more traditional battle group, where all the required elements for battle groups exist in each brigade group; however, subunits reside in single branch functional parent units and are grouped together into temporary combined arms organizations based on task requirements and habitual affiliations?

This short paper will argue that the traditional battle group is a more effective organizational model to generate the flexible and adaptive organizations demanded by *Land Force 2021*. While on the face of it the optimized battle group concept of organizing units such that their force generation and employment organizations are aligned would seem to make sense, this paper will argue that these permanent combined arms groupings do not encourage the necessary flexibility demanded by the ADO concept and that the scattering of combat and combat support subunits other than the infantry has significant negative consequences for the training, oversight and employment of these trades.

The first basic question that must be answered in an examination of the optimized battle group concept is what exactly is the "optimal" organization of a future battle group? Presumably it includes a sufficient variety of capabilities in ample strength to give it the flexibility to successfully prosecute most types of operations the Canadian Army will be expected to undertake in the future security environment outlined in *Land Operations 2021*. In fact, one of the two master questions of the Battle Group 2021 Study is to determine the optimal mix of capabilities and organizations for future force employment units.[5] The ADO concept, however, clearly articulates that as far as future operations are concerned, there is no such thing as a "one size fits all" battle group. It clearly articulates that regular regrouping will be the norm, stating, "The Land Force will require a degree of agility that will permit the rapid projection of increasingly modular and mission-tailored forces capable of regrouping and re-tasking across the full spectrum of conflict."[6] *Land Force 2021* goes on to argue that task tailoring is necessary to defeat the adaptive enemies the Army will face, stating that the Land Force "… requires a force structure that can generate units with capabilities tailored for a specific operation."[7] Viewed in this light, a battle group based on a fixed organization is not optimized for the conduct of operations in the future security environment, as no fixed organization can possess the flexibility and capabilities required to meet the multiple challenges of this environment. It makes little sense, then, to accept the sacrifices and organizational disruption (outlined later in this paper) necessary to transition from the current affiliation-based organization to one based on a "permanent" grouping of capabilities together in Canada if one is only going to have to regroup subunits for each mission anyway.

It can be argued that there are certain capabilities that will always be required in any deployed unit: infantry, armoured, artillery and combat engineers come to mind. Some would argue that even if there is some regrouping based on assigned tasks, the core elements of the optimized battle group will almost always remain grouped together. However, this argument fails to recognize the realities of today's and, even more so, tomorrow's operating environments. As clearly demonstrated by the Canadian Land Force units currently deployed in Afghanistan (such as the provincial reconstruction team [PRT] and observer mentor and liaison team [OMLT]), the traditional battle group no longer provides a basic organizational model applicable for all or arguably even most missions. Even the battle group deployed to Afghanistan has had its standing organization significantly changed several times since its deployment in 2006. These changes have been in response to the changing situation in theatre, not to mention the regular regrouping that takes place between the Canadian battle group and other multinational units in the Afghanistan theatre.

This is not to say that there is no need to improve the capability of the current battle group headquarters through the permanent addition of staff and coordination centres (for example civil-military cooperation, psychological operations, public affairs and information operations) in order to make the battle group a more joint, interagency, multinational and public (JIMP) capable unit and to enhance its ability to exercise control over the increasing number and variety of elements which may be placed under its command. I would argue, however, that it is not possible to create a unit with a fixed organization capable of operating on the modern battlefield. In fact, any attempt to adopt such an organizational model may very well diminish the adaptability of the Canadian battle group, one of the greatest strengths of the Canadian Army. The traditional battle group

concept was based on the regrouping of subunits between different homogeneous combat arms units in order to task tailor units optimally structured for the mission at hand. This organizational model ensured that regrouping was something routinely expected, anticipated and practiced. Drills, standard operating procedures and habitual relationships were developed specifically to deal with the potential for friction from this regular mixing of organizations. There is a good chance that a Land Force composed of optimized battle groups based on fixed organizations already perceived to be task-organized for operations will lose the flexibility and skills necessary to effectively conduct rapid regrouping, particularly during extended periods of non-deployment such as the Canadian Army experienced in the 1980s. In simple terms, in the long run an Army organized into optimized battle groups is inherently less adaptive then the current organizational model.

The previous arguments would be less persuasive if it were not for the serious training and oversight drawbacks inherent in implementing a force generation structure based on permanently grouped mixed arms units. One may be tempted to ask if one is going to have to regroup capabilities based on the environment and tasks, what is the difference if subunits are drawn from homogeneous units or mixed arms optimized battle groups? The difference lies in the fact that by dispersing non-infantry subunits across multiple units one loses the advantages inherent in grouping like units with like.

Key among these advantages is the ability to provide oversight on training by commanders who know the intricacies of their branch. In the current battle group construct for example, artillery regimental commanding officers supervise the training and validate the readiness of batteries and their commanders before they are regrouped with a combined arms battle group. In the optimized battle group construct who would perform this function? Infantry optimized battle group commanding officers would have enough on their plate managing the individual and lower level collective training of infantry soldiers as well as unit level combined arms training without giving them responsibility for overseeing the training of four or more different trade subunits and their soldiers. The current battle group construct ensures that commanders who oversee training have the requisite knowledge and experience to do so effectively. This model also allows the parent branches of the subunits to manage their personal and provide coherent assessment and career development across their respective trades. While this may seem like a small thing, given the intricacies of specialist skills within branches[8] and the current requirement to post soldiers from one subunit to another within a unit, the need for leaders who manage soldier's development to be knowledgeable on trade requirements is critical.

Finally but by no means least, the retention of homogeneous units allows for the conduct of branch-specific, unit-level training. This training would be difficult or impossible with subunits of a trade spread out across multiple units and under the control of numerous commanding officers with competing priorities, none of which are likely to be training for collective skills which do not directly contribute to their unit's readiness. This training is vital for maintaining core trade skills and for the ability of the Canadian Army as a whole to conduct formation level operations. This is yet another example of how the optimized battle group model reduces the flexibility of the Canadian Land Force, in this case by limiting the capability of the Army to conduct formation operations. There has already been a significant degradation in the regimental-level skills of the field artillery and engineers due to the demands of training and fielding batteries and squadrons on operations in Afghanistan. Adoption of the optimized battle group construct would only serve to further exacerbate this worrying trend.

In conclusion, I believe that the optimized battle group organizational model will have a significant detrimental effect on the combined arms capability of the Canadian Army and will not enable the Land Force to generate the flexible and adaptive organizations demanded by the future operating environment. While the principle would seem to align the force generation and employment organizations through a "train as you fight" construct, it in fact does the exact opposite in an environment that demands flexibility and "… a fluid force structure that permits a grouping of personnel across a broad spectrum of military competencies."[9] It instead fixes the force generation organization

of the Canadian battle group and discourages the task tailoring of forces that *Land Operations 2021* argues is necessary for success on the future battlefield. The current battle group construct has worked well at developing flexible, adaptive units capable of task tailoring to make the best use of the varying capabilities within the Canadian Army.

ENDNOTES

1 Alex Ruff and Andrew Godefroy, "Forming Land Forces for the Army of Tomorrow—The Battle Group 2021 Study," Canadian Army Journal volume 11.3 (Fall 2008): 11–19.

2 Andrew B. Godefroy and Peter Gizewski, eds., *Toward Land Operations 2021: Studies in Support of the Army of Tomorrow Force Employment Concept* (Kingston, ON: Canadian Army Directorate of Land Concepts and Design, Government of Canada, 2009).

3 Canadian Department of National Defence, B-GL-310-001/AG-001 *Land Operations 2021: Adaptive Dispersed Operations, The Force Employment Concept for Canada's Army of Tomorrow* (Kingston, ON: Canadian Army Directorate of Land Concepts and Design, Government of Canada, 2007).

4 *Ibid.*, p. 4.

5 Ruff and Godefroy, p. 14.

6 *Land Operations 2021*, p. 32.

7 *Ibid.*, p. 33.

8 For example within the field artillery there are three specialist non-commissioned officer streams, each of which requires specific training and careful career management to ensure soldiers receive the appropriate training and experience to reach their potential.

9 *Land Operations 2021*, p. 33.

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